

Volume

#

R0409

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INDEX DIAGRAM.

Township 37 So., Range 4 E.

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INDEX DIAGRAM.

Township 12 No., Range 9 East

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	540		539		524		511		491		476
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INDEX DIAGRAM.

Township 12 No., Range 10 East

6	559	5	558	4	557	3	556	2	555	1
7		8		9		10		11		12
18		17		16		15		14		13
19		20		21		22		23		24
30		29		28		27		26		25
31		32		33		34		35		36

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INDEX DIAGRAM.

Township -----, Range -----

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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INDEX DIAGRAM.

Township -----, Range -----

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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INDEX DIAGRAM.

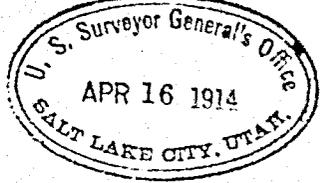
Township _____, Range _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
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BOOK A-409
G.



G.R.

FIELD NOTES

OF THE SURVEY OF THE

SUBDIVISION OF

T. 37 S., R. 4 E.

Of the Salt Lake Base and Meridian,

the State of Utah.

EXECUTED BY

Jos. C. Thoma, and E. R. Bunbury

and Transitman

the capacity of U. S. Surveyor, under instructions dated June 11, 1913,

issued by the United States Surveyor General to govern surveys included in

Group No. 24, which were approved by the Commissioner of the General Land

Office, June 26, 1913, pursuant to authority contained in the Act of

Congress dated, 1913.

Survey commenced November 8, 1913, 1913

Survey completed November 17, 1913, 1913

41-77-26



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INDEX DIAGRAM.

Township 37.5 Range 4.E

6	5	41	4	32	3	22	2	11	1
			40		31		21		10
7	8	39	9	30	10	20	11	9	12
			39		29		20		8
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			35		25		15		5
30	29	34	28	24	27	14	26	4	25
			33		23		13		3
31	32		33		34	11	35	2	36

Chains.

Survey commenced November 7, 1913, and executed with Young & Sons light mountain transit No. 8477, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs. The instrument was examined, tested on the true meridian at Salt Lake City, Utah, found correct and was approved by the Assistant Supervisor of Surveys for Utah, June 14, 1913. I examine the adjustments of the transit and find them correct; then to test the solar apparatus, by comparing its indications resulting from solar observations made during a. m. and p. m. hours, with the meridian determined by observations on Polaris, I proceed as follows:

November 7, 1913. At my camp near the centre of Sec. 14, T. 37 S., R. 4 E., latitude, $37^{\circ} 36'$ N., longitude, $111^{\circ} 29'$ w.; I set off $37^{\circ} 36'$ N. on the lat. arc, $16^{\circ} 17'$ S., on the decl. arc, and at $2^{\text{h}} 44^{\text{m}}$ p. m., l. m. t., determine with the solar a meridian and mark a point thereof, on a stake firmly driven in the ground 10 chs. N. of my station.

November 7, 1913: At $4^{\text{h}} 22^{\text{m}}$ a. m., l. m. t., I observe Polaris at western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a stake set 10 chs. N. of my station.

November 7, 1913.

November 8, 1913: At $7:30$ a. m., l. m. t., I lay off the azimuth of Polaris, $1^{\circ} 27'$ to the east, and the meridian thus determined coincides with the meridian as determined by the p. m. solar of November 7.

November 8, 1913: At $7^{\text{h}} 44^{\text{m}}$ a. m., l. m. t., I set off $37^{\circ} 36'$ N. on the lat. arc, $16^{\circ} 28'$ S. on the decl. arc, and determine the meridian with the solar. The meridian thus determined coincides with the meridian

Chains.

as determined by the observation on Polaris.

A 5 chain Lallie steel tape with clinometer was used in making all measurements.

November 8, 1913: At 1^h 44^m p. m., 1. m. t., I set off 37° 33' N. on the lat. arc, 16° 35' S. on the decl. arc, and determine the meridian with the solar at the cor. of secs. 1, 2, 35 and 36, Tps. 37 and 38 S., R. 4 E., previously described.

Thence I run

N. 0° 01' W., bet. secs. 35 and 36.

Over rolling broken land, covered with scattering scrub cedar and pinon timber with undergrowth of sage brush, yellow top and grass.

10.55 South Fork of Twenty-Mile Wash, 70 lks. wide, 5 lks. deep, drains NE.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 35	S 36
$\frac{1}{4}$	

1913

Dig pits, 18x18x12 ins. N. and S. of post., 3 ft. dist., and raise a mound of earth $2\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

43.70 North Fork of Twenty Mile wash, (dry) 60 lks. wide, 6 ft. deep, drains E.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 25, 26, 35 and 36, with brass cap mkd.

T37S	R4E
S26	S25

S35	S36
1913	

from which

A cedar, 12 ins. in diam., bears N. 59° 30' E., 153 lks. dist., mkd. T37S R4E S25 BT.

A cedar 10 ins. in diam., bears N. 21° 30' W., 174 lks. dist., mkd. T37S R4E S26 BT.

Chains:

A cedar, 10 ins. in diam., bears S. 22° 20' W.,
114 lks. dist., mkd. T37S R4E S35 BT.

A cedar, 12 ins. in diam., bears S. 61° 30' E.,
177 lks. dist., mkd. T37S R4E S36 BT.

Land, rough and broken.

Soil, sandy with clay subsoil; 4th rate.

Timber, scattering scrub cedar and pinon timber with
sage brush undergrowth. Scant grazing.

November 8, 1913.

November 10, 1913: 8^h 14^m a. m., 1. m. t., I set off 37°
34' N. on the lat. arc; 17° 04' S. on the decl. arc,
and determine the meridian with the solar at the cor.
of secs. 25, 26, 35 and 36.

East on a random line bet. secs. 25 and 36.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.96 Intersect the E. bdy. of the twp. 7 lks. S. of the cor.
of secs. 25, 30, 31 and 36, previously described.

Thence I run

S. 89° 57' W., on true line bet. secs. 25 and 36.

Over broken rolling land, covered with scattering scrub
cedar and pinon timber, with undergrowth of yellow top
and grass.

6.85 Twenty Mile Wash, dry, 60 lks. wide, 6 ft. deep, drains
N. 80° E.

36.95 Leave scattering scrub cedar and pinon timber, bears NE.
and SW., enter open sage brush flat.

39.98 Set an iron post, 3 ft. long 1 in. in diam., 26 ins. in
the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 25
 $\frac{1}{4}$

S 36

1913

Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist.,
and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,
N. of cor.

79.96 The cor. of secs. 25, 26, 35 and 36, previously described.

Chains.

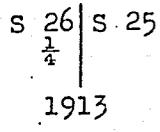
Land, rolling and broken.
Soil, red sand, with sand stone bed rock close to surface.
Timber, scrub cedar and pinon. Fair grazing. Undergrowth, yellow top.

Thence I run

N. 0° 01' W., bet. secs. 25 and 26.

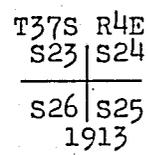
Over rolling land covered with scattering scrub cedar and pinon timber, with undergrowth of sage brush, yellow top and grass.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.



Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. No bearing trees available.

80.00 November 10: Noon lat. observation impracticable.
Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 23, 24, 25 and 26, with brass cap mkd.



from which

A pinon, 12 ins. in diam., bears N. 31° 25' E., 80 lks. dist., mkd. T37S R4E S24, BT.

A pinon, 14 ins. in diam., bears N. 72° 05' W., 59 $\frac{1}{2}$ lks. dist., mkd. T37S R4E S23 BT.

A cedar, 10 ins. in diam., bears S. 10° 35' W., 58 lks. dist., mkd. T37S R4E S26 BT.

A cedar, 6 ins. in diam., bears S. 79° 45' E., 72 $\frac{1}{2}$ lks. dist., mkd. T37S R4E S25 BT.

Land, rolling.

Soil, red sand, with sand stone bed rock close to surface.
Timber, scattering scrub cedar and pinon. Fair grazing. Undergrowth, sagebrush and yellow top.

November 10, 1913: At 2^h 14^m p. m., 1. m. t., I set off

Chains.

37° 35' N. on the lat. arc, 17° 06' S. on the decl. arc,
and determine the meridian with the solar, at the cor.
of secs. 23, 24, 25 and 26.

N. 89° 57' E., on random line bet. secs. 24 and 25.

40.00 Set temp. $\frac{1}{4}$ sec. cor.,

79.96 Intersect the E. bdy. of the twp., 9 lks. S. of the cor.
of secs. 19, 24, 25 and 30, previously described.

Thence I run

S. 89° 53' W., on true line bet. secs. 24 and 25.

Over rolling, hilly land, covered with scattering scrub
cedar and pinon timber, with undergrowth of sage brush,
yellow top and grass.

31.80 Dry draw, 40 lks. wide, 20 lks. deep, drains S. 60° E.

39.98 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 24
 $\frac{1}{4}$

S 25
1913

Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist.,
and raise a mound of earth $2\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

79.96 The cor. of secs. 23, 24, 25 and 26, previously described.
Land, rolling and broken.

Soil, red sand, with sand stone bed rock close to surface.
Timber, scattering scrub cedar and pinon with undergrowth
of sage brush, yellow top and grass. Fair grazing.

November 10, 1913.

November 11, 1913: At 8^h 14^m a. m., l. m. t., I set off
37° 35' N. on the lat. arc, 17° 22' S. on the decl.
arc, and determine the meridian with the solar, at the
cor. of secs. 23, 24, 25 and 26.

Thence I run

N. 0° 01' W., bet. secs. 23 and 24.

Over rolling broken land, covered with scattering scrub
cedar and pinon timber, with undergrowth of sage brush,

Chains.

and grass.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 23	S 24
$\frac{1}{4}$	

1913

Dig pits, 18x18x12 ins. N. and S. of post, 3 ft. dist., and raise a mound of earth $2\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cpr.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 13, 14, 23 and 24, with brass cap mkd.

T37S	R4E
S14	S13

S23	S24
	1913

Dig pits, 18x18x12 ins., in each sec. $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, w. of cor.

Land, rolling and hilly.

Soil, red sand, with sand stone bed rock close to surface.

Timber, scattering scrub cedar and pinon, with undergrowth of sage brush, yellow top and grass. Fair Grazing.

November 11, 1913. At this cor. I set off, $17^{\circ} 24'$ S. on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 36'$ N.

N. $89^{\circ} 53'$ E., on random line bet. secs. 13 and 24.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.04 Intersect the E. bdy. of the twp. 22 lks. N. of the cor. of secs. 13, 18, 19 and 24, previously described.

Thence I run

N. $89^{\circ} 57'$ W., on true line bet. secs. 13 and 24.

Over rolling land, covered with scattering scrub cedar and pinon timber, and an undergrowth of sage brush, yellow top and grass.

7.15 Leave scattering scrub cedar and pinon timber, bears

Chains.

Nw. and SE.; enter open sage brush flat.

23.75 Dry draw, 30 lks. wide, 6 ft. deep, drains SE.

40.02 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

$$\begin{array}{r} S \ 13 \\ \frac{1}{4} \\ \hline \end{array}$$

$$\begin{array}{r} S \ 24 \\ 1913 \end{array}$$

Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

80.04 The cor. of secs. 13, 14, 23 and 24, previously described. Land rolling and hilly.

Soil, red sand, with sand stone bed rock close to surface. Timber scattering scrub cedar and pinon, with sage brush, yellow top and grass undergrowth. Fair grazing.

November 11, 1913.

November 12, 1913 At 8^h 14^m, a. m., 1. m. t., I set off 37° 36' N. on the lat. arc, 17° 37' S. on the decl. arc, and determine the meridian with the solar at the cor. of secs. 13, 14, 23 and 24.

Thence I run

N. 0° 01' w., bet. secs. 13 and 14.

Over rolling hilly land, covered with very scattering scrub cedar and pinon timber, with undergrowth of sage brush, yellow top and grass.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

$$\begin{array}{r} S \ 14 \ | \ S \ 13 \\ \frac{1}{4} \\ \hline \end{array}$$

$$1913$$

Dig pits, 18x18x12 ins. N. and S. of post, 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, w. of cor.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of sess. 11, 12, 13 and 14, with brass cap mkd.

Chains.

T37S R4E	
S11	S12
S14 S13	
1913	

Dig pits, 18x18x12 ins. in each sec., $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor. No bearing trees available.

Land rolling and hilly.

Soil, red sand with dark clay sub soil; 3rd rate.

Tinber, scattering scrub cedar and pinon, with undergrowth of sage brush, yellow top and grass.

Fair grazing.

 November 12, 1913: At this cor. I set off $17^{\circ} 41'$ S., on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 36'$ N.

S. $89^{\circ} 57'$ W., on random line bet. secs. 12 and 13.

40.00 Set temp. $\frac{1}{4}$ sec. cor. ✓

80.13 Intersect the E. bdy. of the twp., 7 lks. S. of the cor. of secs. 7, 12, 13 and 18, previously described.

Thence I run

West, on true line bet. secs. 12 and 13.

Over rolling land covered with very scattering scrub cedar and pinon timber, with a medium undergrowth of sage brush, yellow top and grass.

26.20 Road to Escalante, bears NW. and SE.

40.06 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 12
$\frac{1}{4}$

S 13
1913

Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

71.00 Leave scattering scrub cedar and pinon timber, bears NW. and SE.; enter open sage brush flat.

80.00 Dry draw, 5 lks. wide, 3 ft. deep, drains S. 35° E.

Chains.
80.13 The cor. of secs. 11, 12, 13 and 14, previously described.
Land rolling and hilly.
Soil, red sand with dark clay subsoil; 3rd. rate.
Timber, very scattering scrub cedar and pinon, with a
medium undergrowth of sage brush, yellow top and grass.
November 12, 1913.

November 13, 1913: At 8^h 14^m, a. m., 1. m. t., I set off
17° 53' S. on the decl. arc, 37° 36' N. on the lat.
arc, and determine the meridian with the solar, at
the cor. of secs. 11, 12, 13 and 14.

Thence I run
N. 0° 01' W., bet. secs. 11 and 12.
Over rolling land, covered with scattering scrub cedar
and pinon timber, with an undergrowth of sage brush,
yellow top and grass.

0.55 Dry draw, 5 lks. wide, 3 ft. deep, drains S. 35° E.

7.00 Enter scattering scrub cedar and pinon timber, bears
SE. and W.; leave gently rolling open land.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 11	S 12
$\frac{1}{4}$	
1913	

Dig pits, 18x18x12 ins. N. and S. of post, 3 ft. dist.,
and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
w. of cor.

45.90 Main road to Escalante, bears Nw. and SE.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in
the ground for the cor. of secs. 1, 2, 11 and 12,
with brass cap mkd.

T37S	R4E
S 2	S 1
S11	S12
1913	

Dig pits, 18x18x12 ins., in each sec., $5\frac{1}{2}$ ft. dist., and
raise a mound of earth, 4 ft. base, 2 ft. high, w. of
cor.

Chains.

Land gently rolling.

Soil, red sand with dark clay subsoil.

Timber, very scattering scrub cedar and pinon in the southern portion. Good grazing. Undergrowth, sagebrush and yellow top.

East, on random line bet. secs. 1 and 12.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.23 Intersect the E. bdy. of the twp. 10 lks. N. of the cor. of secs. 1, 6, 7 and 12, previously described.

November 13, 1913: At this cor. I set off $17^{\circ} 57'$ S. on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 37'$ N.

Thence I run
 $N. 89^{\circ} 56' W.$, on the true line bet. secs. 1 and 12.

24.30 Over gently rolling land, covered with a medium growth of sage brush, yellow top and grass.

24.30 Leave open rolling land, bears N. and S., enter scattering scrub cedar and pinon timber.

40.11 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S $\frac{1}{4}$

S 12
1913

from which

A cedar, 6 ins. in diam., bears N. $59^{\circ} 45'$ w.,
 $8\frac{1}{2}$ lks. dist., mkd. $\frac{1}{4}$ S1 BT.

A cedar, 12 ins. in diam., bears S. $11^{\circ} 15'$ w.,
 30 lks. dist., mkd. $\frac{1}{4}$ S12 BT.

68.30 Leave rolling hilly land, covered with scattering scrub cedar and pinon timber, bears NE. and S.; enter open flat.

80.23 The cor. of secs. 1, 2, 11 and 12, previously described. Land, rolling and flat.

Soil, sandy with out crop of sand stone bed rock in places.

2nd: to 4th rates.

Timber, very scattering scrub cedar and pinon. Fair grazing. Undergrowth, sagebrush and yellow top.

chains.

Thence I run

N. $0^{\circ} 01'$ W., on random line bet. secs. 1 and 2.40.00 Set temp. $\frac{1}{4}$ sec. cor.79.80 Intersect the N. bdy. of the twp. 18 lks. W. of the cor.
secs. 1, 2, 35 and 36, previously described.

Thence I run

S. $0^{\circ} 07'$ W., on true line bet. secs. 1 and 2.Over gently rolling land, covered with a medium growth
of sage brush, yellow top and grass.39.80 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.S $\frac{2}{4}$ | S 1

1913

Dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.,
and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.79.80 The cor. of secs. 1, 2, 11 and 12, previously described.
Land, gently rolling.Soil; sandy, with sand stone bed rock close to surface;
3rd rate.

Fair grazing.

November 13, 1913.

Undergrowth, sagebrush and yellow top.



U. S. Transitman.

November 8, 1913: At 2^h 44^m p. m., 1. m. t., I set off
 $37^{\circ} 33'$ N. on the lat. arc, $16^{\circ} 35'$ S. on the decl.
arc, and determine the meridian with the solar at the
cor. of secs. 2, 3, 34 and 35, on the S. bdy. of the
twp., heretofore described.

Thence I run

N. $0^{\circ} 01'$ W., bet. secs. 34 and 35.Desc. over mountainous land, covered with scattering
scrub cedar and pinon timber.

4.00 Leave mountainous land, covered with scattering scrub

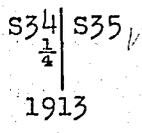
Chains.

cedar and pinon timber., bears NW. and SE.; enter nearly level open sage brush flat.

37.00 Leave open sage brush flat., bears E. and W.; enter level land covered with scattering scrub cedar and pinon timber.

38.10 Dry draw, 20 lks. wide 5 ft. deep, drains NE.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the 1/4 sec. cor., with brass cap mkd.

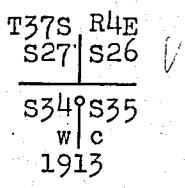


Raise amount of stone 2 ft. base, 1 1/2 ft. high, w. of cor. No bearing trees available. Continue on slight desc.

70.20 Perpendicular ledge, 50 ft. high, desc. over rocky slope. bears NW. and SE.

76.00 Foot of desc., 150 ft. below top, bears NW. and SE.; continue over level bottom land.

79.90 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the w. c. to the cor. of secs. 26, 27, 34 and 35, with brass cap mkd.



Dig pits, 18x18x12 ins., in each sec., 5 1/2 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, w. of cor.

80.00 True point for cor. falls near the edge of the N. fork of Twenty Mile Wash, cor. not set.

Land mountainous and broken.

Soil, stony and rocky on the slopes and sandy in the Twenty Mile Wash; 4th rate.

Timber, scattering scrub cedar and pinon with undergrowth of sage brush. Scant grazing.

chains. East, on a random line bet. secs. 26 and 35, from the true point for the cor. of secs. 26, 27, 34 and 35.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

November 8, 1913.

November 10, 1913: At 8^h 44^m a. m., l. m. t., I set off 37° 34' N. on the lat. arc, 17° 05' S. on the decl. arc and determine the meridian with the solar, at the $\frac{1}{4}$ sec. cor., bet. secs. 26 and 35.

Continue East, on a random line bet. secs. 26 and 35.

30.10 Intersect the N. and S. line, 20 lks. S. of the cor. of secs. 25, 26, 35 and 36, previously described.

Thence I run

S. 89° 51' W., on true line bet. secs. 26 and 35.

Asc. over rough broken land, covered with scattering scrubcedar and pinon timber.

7.10 Top of spur of ridge, bears N. and S.; 250 ft. above cor.; desc. over broken W. slope.

7.10 Bottom of desc., 150 ft. below top, continue over level sandy bottom of draw.

8.10 Dry draw, 10 lks. wide, 5 lks. deep, drains S.

2.00 Dry draw, 20 lks. wide, 5 ft. deep, drains S.; asc. over rocky slope of spur of ridge,

0.05 Set an iron post, 3-ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 26
 $\frac{1}{4}$

S 35
1913

Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N' of cor. No bearing trees available.

2.10 Top of spur of ridge, projects S., 200 ft. above wash, desc.

2,10 Dry draw, 30 lks. wide, 6 ft. deep, drains S.

0.10 Desc. over sand stone ledge, 20 ft. high, bears NW. and SE.; continue over level sandy bottom of wash.

2.10 N. Fork Twenty-Mile Wash, drains S. 60° E., continue along

Chains.

cut bank of wash.

80.10 The cor. of secs: 26; 27, 34 and 35, previously described. Land, level in bottom land, rough and broken on the ridges and slopes. Soil, sandy in the bottom, clay and rocky on ridges and slopes; 4th rate: Timber, very scattering scrub cedar and pinon. Scant grazing.

 November 10: Noon lat. observation impracticable. Thence I run

N. 0° 01' W.; bet. secs. 26 and 27.

Over level sandy bottom of Twenty Mile Wash.

0.50 Twenty Mile Wash, dry, 1 ch. wide, 12 ft. deep, drains E.

14.50 Perpendicular bluff, 100 ft. high, bears E. and W. At the foot of bluff is a small spring of slightly alkali water which could be used for culinary purposes. Continue asc. through scattering cedar and pinon timber.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.



from which

A cedar, 8 ins. in diam., bears S: 61° E.,
 4 lks. dist., mkd. $\frac{1}{4}$ S26 BT.

A cedar, 12 ins. in diam., bears S. 61° W.,
 88 lks. dist., mkd. $\frac{1}{4}$ S27 BT.

Desc. over broken W. slope of ravine.

53.75 Dry draw, 50 lks. wide, 4 ft. deep, 150 ft. below the top of perpendicular bluff, drains SW.; asc. over Sw. face of bench.

69.50 Asc. over sand stone bluff, 50 ft. high, bears NE. and SW.; continue asc.

70.04 Top of small spur of bench, projects E.; desc., over broken E. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in

Chains.

the ground for the cor. of secs. 23, 24, 25 and 26, with brass cap mkd.

T37S R4E	
S22	S23
S27	S26

1913

from which

A pinon, 8 ins. in diam., bears N. 15° E., 38 lks. dist., mkd. T37S R4E S23 BT.

A pinon, 12 ins. in diam., bears S. 39° E., 93 lks. dist., mkd. T37S R4E S26 BT

A cedar, 12 ins. in diam., bears S. 32° W., 33 lks. dist., mkd. T37S R4E S27 BT.

A cedar, 12 ins. in diam., bears N. 55° W., 30 lks. dist., mkd. T37S R4E S22 BT.

This corner is established between two large boulders with surface too rough to mark as bearing objects. The face of one boulder is 75 lks. N. and the face of the other is 10 lks. E. of the cor.

Soil, rocky; 4th rate.

Land, rough and broken.

Timber, scattering scrub cedar and pinon. Poor grazing.

November 10, 1913.

November 11, 1913, I run N. 89° 51' E., on random line bet. secs. 23 and 26.

40.00 Set temp. 1/4 sec. cor.

80.13 Intersect the N. and S. line, 13 lks. N. of the cor. of secs. 23, 24, 25 and 26, previously described.

Thence I run

S. 89° 57' W., on true line bet. secs. 23 and 26.

Asc. over rough broken land, covered with scattering scrub cedar and pinon timber.

20.00 Top of asc., 200 ft. above cor., bears N. and S.; desc. gradually over rough broken bad lands.

40.06 1/2 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the 1/4 sec. cor., with brass cap mkd.

S 23
1/4
S 26

Subdivision of T. 37 S., R. 4 E.

Chains.

from which

A cedar, 16 ins. in diam., bears S. 51° E.,
10 lks. dist., mkd. ¼ S26 BT.

A cedar, 18 ins. in diam., bears N. 81° w.,
58 lks. dist., mkd. ¼ S23 BT.

44.00 Dry draw, 1 ch. wide, 5 ft. deep, drains S.; asc.

51.00 Top of spur projects S., desc.

74.50 Dry draw, 20 lks. wide, 4 ft. deep, drains S.; asc.

80.13 The cor. of secs. 22, 23, 26 and 27, previously described.

Land rough and broken.

Soil, sandy, and clay and adobe; 4th rate.

Timber, scattering scrub cedar and pinon. Poor grazing.

November 11, 1913: At 1^h 44^m p. m., 1. m. t., I set off
37° 35' N. on the lat. arc, 17° 25' S. on the decl. arc,
and determine the meridian with the solar at the cor.
of secs. 22, 23, 26 and 27.

Thence I run

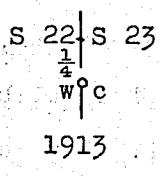
N. 0° 01' w., bet. secs. 22 and 23.

Over rough, broken land, covered with scattering scrub
cedar and pinon timber.

19.00 Sand stone ledge, 25 ft. high, bears E. and W.; desc.
over broken N. slope.

30.00 Spur of ridge, 75 ft. high, projects W.; desc. over
rough and broken land.

39.72 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
the ground for the worC. to the ¼ sec. cor., with brass
cap mkd.



from which

A pinon, 8 ins. in diam., bears N. 56° E.,
51 lks. dist., mkd. ¼ S23 WC BT.

A pinon, 10 ins. in diam., bears S. 83° w.,
23 lks. dist., mkd. ¼ S22 WC BT

True point for cor. falls in dry draw.

- Chains.
 40.00 Dry draw, 50 lks. wide, 4 ft. deep, drains Sw.; asc. over rough broken land, covered with large boulders.
 72.00 Top of asc., bears E. and W., continue over rolling broken mesa, covered with dense scrub cedar and pinon timber.
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in ground., for the cor. of secs. 14, 15, 22, and 23, with brass cap mkd.

T37S	R4E
S15	S14
S22	S23
1913	

from which

A cedar, 12 ins. in diam., bears N. 82° E.,
 38 lks. dist., mkd. T37S R4E S14 BT.

A cedar, 10 ins. in diam., bears S. 63° E.,
 44 lks. dist., mkd. T37S R4E S23 BT.

A pinon, 8 ins. in diam., bears S. 74° w.,
 15 lks. dist., mkd. T37S R4E S22 BT.

A cedar, 12 ins. in diam., bears N. 13° w.,
 61 lks. dist., mkd. T37S R4E S15 BT.

Land, rough and broken in the S. $\frac{1}{2}$, rolling in the N. $\frac{1}{2}$.
 Soil, clay and rocky; 4th rate in the S. $\frac{1}{2}$; sandy and stony in the N. $\frac{1}{2}$: 3rd rate.

Timber, scattering scrub cedar and pinon. Poor grazing.

November 11, 1913.

November 12, 1912: At 8^h 14^m a. m., l. m. t., I set off 37° 36' N. on the lat. arc, 17° 37' S. on the decl. arc, and determine the meridian with the solar, at the cor. of secs. 14, 15, 22 and 23.

N. 89° 57' W., on random line bet. secs. 14 and 23.

40.00 Set temp. $\frac{1}{4}$ sec. cor.,

79.96 Intersect the N. and S. line 5 lks. S. of the cor. of secs. 13, 14, 23 and 24, previously described.

Thence I run

S. 89° 55' W., on true line bet. secs. 14 and 23.

Asc. over rough broken land, covered with scattering

Chains.

scrub cedar and pinon timber, with undergrowth of sage brush, yellow top and grass.

- 35.00 Foot of perpendicular sand stone ledge, 200 ft. high, bears N. and S.
- 35.47 Top of perpendicular sand stone ledge, bears N. and S.; desc. gradually over rough broken land covered with dense scrub cedar and pinon timber.
- 39.98 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

$$\begin{array}{r} S\ 14 \\ \hline \frac{1}{4} \end{array}$$

$$\begin{array}{r} S\ 23 \\ 1913 \end{array}$$

from which

A pinon, 12 ins. in diam., bears N. 43° W.,
53 lks. dist., mkd. $\frac{1}{4}$ S14 BT.

A pinon, 8 ins. in diam., bears S. 39° E.,
71 lks. dist., mkd. $\frac{1}{4}$ S23 BT.

- 60.00 November 12, Latitude observation at noon impracticable. Head of dry draw, 5 lks. wide, 1 ft. deep, drains S.; asc.
- 79.96 The cor. of secs. 14, 15, 22 and 23, previously described.

Land rough and broken.

Soil, sandy and stony; 4th rate. Undergrowth sagebrush and yellow top.
Timber scattering scrub cedar and pinon. Poor grazing.

November 12, 1913: At 1^h 44^m, p. m., 1^y m. t., I set off $37^{\circ} 36'$ N. on the lat. arc, $17^{\circ} 42'$ S. on the decl. arc, and determine the meridian with the solar at the cor. of secs. 14, 15, 22 and 23.

Thence I run

N. $0^{\circ} 01'$ W., bet. secs. 14 and 15.

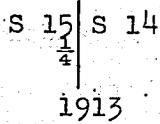
Over rolling mesa, covered with dense scrub cedar and pinon timber.

- 11.10 Leave rolling mesa, bears E. and W.; desc. abruptly over sandstone ledge, 50 ft. high, and broken N. slope of mesa.
- 23.00 Dry draw, 10 lks. wide. 3 ft. deep; drains Nw.; desc.

Chains.

over rolling broken foot hills covered with scattering scrub cedar and pinon timber.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.



from which

A cedar, 12 ins. in diam., bears S. 37° w.,
30 lks. dist., mkd. $\frac{1}{4}$ S15 BT.

A cedar, 24 ins. in diam., bears S. 29° E.,
74 lks. dist., mkd. $\frac{1}{4}$ S14 BT.

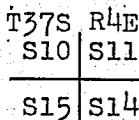
46.00 Leave dense cedar and pinon timber, and rolling broken foot hills, bears E. and W.; desc. gradually over gently rolling land covered with sage brush, yellow top and grass.

52.80 Dry draw, 10 lks. wide, 2 ft. deep, drains N. 5° E.; desc.

62.70 Dry draw, 10 lks wide, 5 ft. deep, drains NE.; continue desc.

72.40 Dry draw, 20 lks. wide, 10 ft. deep, drains E.; asc.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 10, 11, 14 and 15, with brass cap mkd.



1913

Dig pits, 18x18x12 ins., in each sec., $5\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, w. of cor.

Land, rough and broken in the S. $\frac{1}{2}$; gently rolling in the N. $\frac{1}{2}$.

Soil, sandy and stone in the S. $\frac{1}{2}$; 4th rate; sandy in the N. $\frac{1}{2}$; 3rd rate.

Timber, scrub cedar and pinon. Scant grazing. Undergrowth sagebrush and yellow top. November 12, 1913.

Chains.

November 13, 1913: At 8^h 14^m a. m., 1. m. t., I set off 37° 36' N. on the lat. arc, 17° 53' S. on the decl., arc; and determine the meridian with the solar, at the cor. of secs. 10, 11, 14 and 15.

N. 89° 55' E., on random line bet. secs. 11 and 14.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.99 Intersect the N. and S. line 9 lks. S. of the cor. of secs. 11, 12, 13 and 14, previously described.

Thence I run

S. 89° 51' W., on true line bet. secs. 11 and 14.

Over gently rolling land, covered with sage brush, yellow top and grass.

39.99 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 11
 $\frac{1}{4}$

S 14
1913

Dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

75.60 Dry draw, 20 lks. wide, 10 ft. deep, drains NE.; asc.

79.99 The cor. of secs. 10, 11, 14 and 15, previously described.

Land, gently rolling.

Soil, sandy loam, with sub soul of clay; 2nd rate.

No timber. Good grazing. Undergrowth, sagebrush and yellow top.

Thence I run

N. 0° 01' W., bet. secs. 10 and 11.

Asc. gradually over gently rolling land, covered with sage brush, yellow top and grass.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 10 | S 11
 $\frac{1}{4}$

1913

Dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.,

Chains.

and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, w. of cor.

76.00 Top of asc., bears E. and w.; desc. gradually.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 2, 3, 10 and 11, with brass cap mkd..

T37S. R4E	
S 3	S 2

S10	S11
1913	

Dig pits, 18x18x12 ins., in each sec., $5\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, w. of cor.

Land, gently rolling.

Soil, sandy loam with clay sub soil; 2nd rate.

No timber. Good grazing. Undergrowth, sagebrush and yellow spr.

November 13, 1913: At this cor. I set off $17^{\circ} 57'$ S., on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 37'$ N.

N. $89^{\circ} 51'$ E., on random line bet. secs. 2 and 11.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.95 Intersect the N. and S. line 2 lks. N. of the cor. of secs. 1, 2, 11 and 12.

Thence I run

S. $89^{\circ} 52'$ W., on true line bet. secs. 2 and 11.

Over gently rolling land, covered with sage brush, yellow top and grass.

35.85 Main desert road to Escalante, bears Nw. and SE.

39.97 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 2
$\frac{1}{4}$

S 11
1913

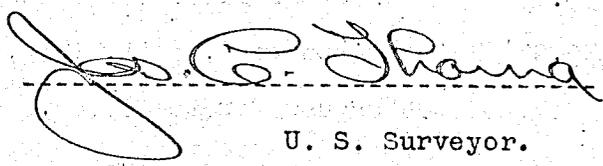
Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Chains.

- 79.95 The cor. of secs. 2, 3, 10 and 11, previously described.
 Land, gently rolling.
 Soil, sandy loam with dark clay subsoil; 2nd rate.
 No timber. Fair grazing. Undergrowth, sagebrush and yellow top.
-
- N. 0° 01' W., on random line bet. secs. 2 and 3.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.06 Intersect the N. bdy. of the Twp., 14 lks. W. of the cor. secs. 2, 3, 34 and 35., previously described.
 Thence I run
 S. 0° 05' W., on true line bet. secs. 2 and 3.
 Asc. over rolling land, covered with sage brush, yellow top and grass.
- 19.20 Main desert road to Escalante, bears NW. and SE.
- 40.06 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.
- S $\frac{3}{4}$ | S 2

1913
- Dig pits, 18x18x12 ins. N. and S. of post, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 73.80 Top of asc., bears E. and W.; desc. gradually.
- 80.06 The cor. of secs. 2, 3, 10 and 11, previously described.
 Land, gently rolling.
 Soil, sandy loam, with dark clay subsoil; 2nd rate.
 Timber, an occasional scrub cedar and pinon. Fair grazing.
 Undergrowth, sagebrush and yellow top.

November 13, 1913.


 U. S. Surveyor.

Subdivision of T. 37 S., R. 4 E.

Chains.

November 14, 1913: At 8^h 44^m a.m., l. m. t., I set off 37° 34' N. on the lat. arc, 18° 09' S., on the decl. arc, and determine the meridian with the solar, at the true point for cor. of secs. 26, 27, 34, and 35.

Thence I run

West, on true line bet. secs. 27 and 34, from true point. Over broken slope of Collet Canon, through scattering scrub cedar and pinon timber.

20.50 Leave Canon, bears N. 70° W. and S. 70° E.

29.50 Top of broken mesa, 125 ft. above canon, bears N. 70° W., and S. 70° E.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the 1/4 sec. cor., with brass cap mkd.

S 27
1/4

S 34
1913

from which

A cedar, 8 ins. in diam., bears N. 16° W., 24 lks. dist., mkd. 1/4 S27 BT.

A cedar, 7 ins. in diam., bears South, 14 lks. dist., mkd. 1/4 S34 BT.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 27, 28, 33 and 34, with brass cap mkd.

T37S R4E
S28 S27
S33 S34
1913

Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. No bearing trees available.

15.00 chs. S. of this cor. is a series of perpendicular ledges, 1000 ft. high.

Land, broken.

Soil, coarse gravel and stony, with bed rock close to surface; 4th rate.

Timber, scattering scrub cedar and pinon. Poor grazing. November 14, Noon latitude observation impracticable.

Subdivision of T. 37 S., R. 4 E.

Chains.

N. 0°.02' W., bet. secs. 27 and 28.

Over rough broken mesa covered with scattering scrub cedar and pinon timber, with undergrowth of sage brush, yellow top and grass.

9.00 Start abrupt desc. into canon, bears E. and W.

20.00 Right Hand Collet Canon, 120 ft. below top of mesa, dry, drains S. 80° E.

30.25 Top of broken mesa, 180 ft. above wash, bears S. 80° E., and N. 80° W.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the 1/4 sec. cor., with brass cap mkd.

S 28 | S27
1/4
1913

from which

A pinon, 6 ins. in diam., bears N. 57° 20' E., 66 lks. dist., mkd. 1/4 S27 BT.

A cedar, 6 ins. in diam., bears N. 11° 30' W., 27 lks. dist., mkd. 1/4 S28 BT.

64.20 Start desc. into ravine, bears NW. and SE.

67.10 Ravine, 100 ft. below top of mesa, drains SE.; asc.

72.80 Top of broken mesa, 100 ft. above ravine, bears Nw. and SE.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 21, 22, 27 and 28, with brass cap mkd.

T37S R4E
S21 | S22
S28 | S27
1913

from which

A cedar, 8 ins. in diam., bears N. 33° 45' E., 90 lks. dist., mkd. T37S R4E S22 BT.

A pinon, 10 ins. in diam., bears N. 37° 45' W., 46 1/2 lks. dist., mkd. T37S R4E S21 BT.

A cedar, 12 ins. in diam., bears S. 83° 35' W., 16 1/2 lks. dist., mkd. T37S R4E S28 BT.

Chains.

A cedar, 6 ins. in diam., bears S. 22° 30' E.,
107 lks. dist., mkd. T37S R4E S27 BT.

Land, broken.

Soil, sand, gravel and rocky with bed rock close to
surface; 4th rate.

Timber, scattering scrub cedar and pinon. Poor grazing.

November 14, 1913.

November 15, 1913: At 7^h 45^m, a. m., l. m. t., I set off
37° 35' N. on the lat. arc, 18° 23' S. on the decl.
arc, and determine the meridian with the solar at the
cor. of secs. 21, 22, 27 and 28.

East, on random line bet. secs. 22 and 27.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.86 Intersect the N. and S. sec. line, 8 lks. N. of the cor.
of secs. 22, 23, 26 and 27, previously described.

Thence I run

N. 89° 57' W., on true line bet. secs. 22 and 27.

Over broken land, covered with scattering scrub cedar and
pinon timber, with sage brush, yellow top and grass un
undergrowth.

17.75 Top of broken mesa, 100 ft. above cor., bears N. and S.

25.55 Ravine 110 ft. below top of mesa, bears S.; asc.

30.21 Rim of mesa, 110 ft. above bottom of ravine, bears N. & S.

39.93 Set an iron post, 3 ft. long, 1 in. in diam. over cross
on solid rock, with mound of stone around post, with
brass cap mkd.

S 22
 $\frac{1}{4}$

S 27
1913

Raise a mound of stone, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of
cor. No bearing trees available.

50.75 Leave scattering scrub cedar and pinon timber, bears N.
and SE.; enter dense cedar and pinon timber.

79.86 The cor. of secs. 21, 22, 27 and 28, previously described.

Chains.

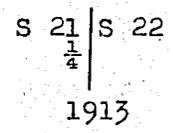
Land, broken.
 Soil, sandy and stony, with bed rock close to surface.
 4th rate.
 Timber, scattering scrub cedar and pinon, with undergrowth
 of sage brush, yellow top and grass. Fair grazing.

Thence I run

N. 0° 02' W., bet. secs. 21 and 22.

Over flat mesa, covered with scattering scrub cedar and
 pinon timber, with a medium undergrowth of sage brush
 and grass.

- 26.25 Leave level mesa, start abrupt desc. into ravine.
- 29.90 Ravine, 50 ft. below top of mesa, drains S. 25° W.; asc.
- 37.25 Top of broken mesa, 55 ft. above bottom of ravine, bears
 N. 25° E. and S. 25° W.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., over cross
 on solid rock, in a mound of stone, for the $\frac{1}{4}$ sec. cor.
 with brass cap mkd.

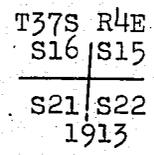


from which

A cedar, 10 ins. in diam., bears S. 33° 10' E.,
 79 lks. dist., mkd. $\frac{1}{4}$ S22 BT.

A cedar, 12 ins. in diam., bears S. 77° 15' W.,
 33 lks. dist., mkd. $\frac{1}{4}$ S23 BT.

- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins.
 in the ground for the cor. of secs. 15, 16, 21 and 22,
 with brass cap mkd.



from which

A cedar, 10 ins. in diam., bears N. 21° 40' E.,
 75 lks. dist., mkd. T37S R4E S15 BT.

A cedar, 6 ins. in diam., bears N. 22° 50' W.,

Chains.

95 lks. dist., mkd. T37S R4E S16 BT.

A cedar, 7 ins. in diam., bears S. 23° 40' w.,

32½ lks. dist., mkd. T37S R4E S21 BT.

A cedar, 6 ins. in diam., bears S. 55° E.,

50 lks. dist., mkd. T37S R4E S22 BT.

Land, rolling and broken.

Soil, sandy and stony, with bed rock close to surface;

4th rate.

Timber, scattering scrub cedar and pinon, with a medium

under growth of sage brush and grass. Scant grazing.

November 15, 1913: At this cor. I set off 18° 28' S. on the decl. arc, and at app. noon observe the sun on the meridian, the resulting lat. is 37° 35' N.

S. 89° 57' E., on random line bet. secs. 15 and 22.

40.00 Set temp. ¼ sec. cor.

79.84 Intersect the N. and S. sec. line 2 lks. N. of the cor. of secs. 14, 15, 22 and 23, previously described.

Thence I run

N. 89° 56' W., on true line bet. secs. 15 and 22.

Over rough broken mesa, covered with scattering scrub cedar and pinon timber, and a medium growth of yellow top and grass.

39.92 Set an iron post, 3 ft. long, 1 in. in diam., over cross on solid rock, in a mound of stone, for the ¼ sec. cor., with brass cap mkd.

S 15
¼

S 22
1913

from which

A pinon, 12 ins. in diam., bears N. 77° E.,

10 lks. dist., mkd. ¼ S15 BT.

A cedar, 6 ins. in diam., bears S. 74° 35' w.,

27 lks. dist., mkd. ¼ S22 BT.

79.84 The cor. of secs. 15, 16, 21 and 22, previously described.

Subdivision of T. 37 S., R. 4 E.

Chains.

Land, rolling and broken.

Soil, sandy and stony with bed rock close to surface;

4th rate.

Timber, scattering scrub cedar and pinon with a medium

undergrowth of sage brush and grass. Scant grazing.

November 15, 1913.

November 17, 1913. At 9^h 15^m a. m., l. m. t., I set off

37° 35' N. on the lat. arc, 18° 56' S. on the decl.

arc, and determine the meridian with the solar at the
cor. of secs. 15, 16, 21 and 22.

Thence I run

N. 0° 02' W., bet. secs. 15 and 16.

Over broken mesa, covered with scattering scrub cedar and
pinon timber, with an undergrowth of sage brush,
yellow top and grass.

34.60 Rim of mesa, bears Nw. and E.; desc. over broken slope.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., over cross
on solid rock in a mound of stone, for the $\frac{1}{4}$ sec. cor.,
with brass cap mkd.

$$\begin{array}{c} \text{S } 16 \left| \text{S } 15 \right. \\ \frac{1}{4} \\ \hline 1913 \end{array}$$

Raise a mound of stone, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, w. of
cor. No bearing trees available.

Corner is established 65 ft. below top of mesa.

42.10 Ravine, drains E.; 25 ft. below $\frac{1}{4}$ sec. cor.; asc. over
sand stone ledges bear NE. 8 chs. and W.

50.30 Top of ledges, bears NE. 6 chs. and W., 135 ft. above
bottom of ravine.

58.10 Ravine, 190 ft. below top of spur of ledges, drains
E.; asc.

70.25 Top of mesa, bears E. and Sw., 205 ft. above bottom of
ravine.

82.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins.

in the ground for the cor. of secs. 9, 10, 15 and 16.
This cor. falls 5 lks. S. and 5 lks. E. of temp pt. set
by Thom on Nov. 15. (See Page 39)

Chains.

with brass cap mkd.

T37S	R4E
S 9	S10
S16	S15
1913	

from which

A cedar, 10 ins. in diam., bears N. 57° E.,
80 lks. dist., mkd. T37S R4E S10 BT.

A pinon, 18 ins. in diam., bears N. 75° 50' W.,
155 lks. dist., mkd. T37S R4E S9 BT.

A cedar, 6 ins. in diam., bears S. 40° 05' W.,
93 lks. dist., mkd. T37S R4E S16 BT.

A cedar, 10 ins. in diam., bears S. 61° 15' E.,
46½ lks. dist., mkd. T37S R4E S15 BT.

Land, rolling and broken.

Soil, sandy and stony; 4th rate.

Timber, scattering scrub cedar and pinon, with a medium
undergrowth of sage brush, yellow top and grass.

Scant grazing.

November 17, 1913: At this cor. I set off 18° 58' S. on the
decl. arc, and at app. noon, observe the sun on the
meridian, the resulting lat. is 37° 36' N.

S. 89° 56' E., on random line bet. secs. 10 and 15.

40.00 Set temp. ¼ sec. cor.

79.92 Intersect the N. and S. sec. line 7 lks. S. of the cor.
of secs. 10, 11, 14 and 15, previously described.

Thence I run

N. 89° 59' W., on true line bet. secs. 10 and 15.

Over gently rolling mesa, through scattering scrub cedar
and pinon timber, with undergrowth of sage brush,
yellow top and grass.

39.96 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in
the ground for the ¼ sec. cor., with brass cap mkd.

S 10
¼

S 15
1913

Subdivision of T. 37 S., R. 4 E.

Chains.

Dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.

56.40 Foot of slope of mesa, 195 ft. high, bears N. and S.

61.70 Asc. over ledges along edge of mesa, bears N. and S.; asc. gradually over nearly level mesa.

79.92 The cor. of secs. 9, 10, 15 and 16, previously described. Land gently rolling and broken.

Soil, red sand in the E. ½; white sand and stony in the W. ½; 2nd and 4th rates.

Timber, scattering scrub cedar and pinon, with a medium undergrowth of sage brush, yellow top and grass.

Fair grazing.

November 17, 1913.

November 18, 1913: At 8^h 15^m a. m., l. m. t. I set off 37° 36' N. on the lat. arc, 19° 09' S. on the decl. arc, and determine the meridian with the solar at the cor. of secs. 9, 10, 15 and 16.

Thence I run N. 0° 02' w., bet. secs. 9 and 10.

Over broken rolling mesa, covered with scattering scrub cedar and pinon timber, with a medium undergrowth of sage brush, yellow top and grass.

39.75 Leave mesa, bears E. and W.; desc. over broken N. slope.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the ¼ sec. cor., with brass cap mkd.

S 9 | S 10
¼
1913

Raise a mound of stone, 3 ft. base, 1½ ft. high, W. of cor. Bearing trees not available.

Cor. is established 10 ft. below top of mesa.

54.50 Foot of mesa, 330 ft. below ¼ sec. cor., bears E. and W.; leave broken N. slope continue over rolling land.

80.00 Set an iron post, 2 ins. in diam., 24 ins. in the ground

Chains.

for the cor. of secs. 3, 4, 9 and 10, with brass cap mkd.

T37S	R4E
S 4	S 3
S 9	S 10
1913	1913

from which

A cedar, 6 ins. in diam., bears N. 44° 05' E.,

49½ lks. dist., mkd. T37S R4E S3 BT.

A cedar, 6 ins. in diam., bears N. 61° W.,

54 lks. dist., mkd. T37S R4E S4 BT.

A pinon, 6 ins. in diam., bears S. 22° 50' W.,

46½ lks. dist., mkd. T37S R4E S10 BT.

A pinon, 5 ins. in diam., bears S. 42° 45' E.,

43 lks. dist., mkd. T37S R4E S10BT.

Land, broken and rolling.

Soil, sandy and stony; 3rd and 4th rates.

Timber, scattering scrub cedar and pinon with undergrowth

of sage brush, yellow top and grass. Scant grazing.
 This cor. falls 16 lks. N. and 11 lks. E. of the temp.
 point set by Thoma on November 17. (See page 40.)

S. 89° 59' E., on random line bet. secs. 3 and 10.

40.00 Set temp. ¼ sec. cor.

79.95 Intersect the N. and S. Sec. line 16 lks. N. of the cor.
 of secs. 2, 3, 10 and 11, previously described.

Thence I run

N. 89° 52' W., on true line bet. secs. 3 and 10.

Over rolling land covered with scattering scrub cedar and
 pinon timber with undergrowth of yellow top, sage brush
 and grass.

14.95 Leave scattering scrub cedar and pinon timber, bears N.
 and SW.; enter open rolling land.

39.97½ Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for the ¼ sec. cor., with brass cap mkd.

S 3
¼
S 10
1913

Dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.,
 and raise a mound of earth, 3½ ft. base, 1½ ft. high,
 N. of cor.

Subdivision of T. 37 S., R. 4 E.

Chains.

- 51.45 Leave gently rolling open land, bears N. and SW.; asc. over broken land, covered with scattering scrub cedar and pinon timber.
- 79.95 The cor. of secs. 3, 4, 9 and 10, previously described. Land, rolling.
Soil, red sand, 51.45 chs.; sandy and rocky 28.50 chs. Timber, scattering scrub cedar and pinon. Fair grazing.
-
- November 18, 1913: At this cor. I set off $19^{\circ} 12'$ S. on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 37'$ N.
- Thence I run
N. $0^{\circ} 02'$ W. on random line bet. secs. 3 and 4.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.95 Intersect the N. bdy. of the twp., 14 lks. W. of the cor. of secs. 3, 4, 33 and 34, previously described.
- Thence I run
S. $0^{\circ} 04'$ W., on true line bet. secs. 3 and 4.
- Over gently rolling land, covered with sage brush, yellow top and grass.
- 35.35 Leave gently rolling land, bears NW. and E.; enter broken hilly land, covered with scattering scrub cedar and pinon timber.
- 39.95 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.
- | | | | | |
|---|---------------|--|---|---|
| S | 4 | | S | 3 |
| | $\frac{1}{4}$ | | | |
| | 1913 | | | |
- from which
- A cedar, 10 ins. in diam., bears N. $18^{\circ} 25'$ E.,
78 lks. dist., mkd. $\frac{1}{4}$ S3 BT.
- A cedar, 6 ins. in diam., bears N. $31^{\circ} 10'$ W.,
107 lks. dist., mkd. $\frac{1}{4}$ S4 BT.
- 66.85 Dry draw, 20 lks. wide, 5 ft. deep, drains NE.
- 79.95 The cor. of secs. 3, 4, 9 and 10, previously described. Land, rolling.
Soil, red sand in the northern half; sand and stony in

Chains.

the southern half, 3rd and 4th rates.

Timber, scattering scrub cedar and pinon. Fair grazing.

Undergrowth, sagebrush and yellow top. November, 18, 1913.

Edward R. Bunbury

U. S. Transitman.

November 14, 1913: At 8^h 14^m a. m., l. m. t., I set off 37° 34' N. on the lat. arc, 18° 10' S. on the decl. arc, and determine the meridian with the solar, at the cor. of secs. 27, 28, 33 and 34.

Thence I run

West, on true line bet. secs. 28 and 33.

Over a series of small ridges and ravines, covered with dense scrub cedar and pinon timber.

29.50 Ravine, 75 ft. deep, drains N.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 28
 $\frac{1}{4}$

S 33
1913

from which

A pinon, 10 ins. in diam., bears N. 18° E.,
44 lks. dist., mkd. $\frac{1}{4}$ S28 BT.

A cedar, 8 ins. in diam., bears S. 19° E.,
51 lks. dist., mkd. $\frac{1}{4}$ S33 BT.

46.70 Ravine, 75 ft. deep, drains NE.

60.00 Desc. over broken slope of Collet Canon.

79.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the W. C. to the cor. of secs. 28, 29, 32 and 33, with brass cap mkd.

T37 S R4E
S29 | S28
-----|w°c
S32 | S33
1913

Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of c cor.

Chains.

80.00 True point for cor. falls in Collet Wash, which is 60 lks. wide and 15 ft. deep and drains N. 80° E.; cor. not set. Land, rough and broken.

Soil, dark clay and stony; 4th rate.

Timber, scattering scrub cedar and pinon. Poor grazing.

Thence I run

N. 0° 03' W., from the witness cor., on a 1 ch. off set to the east of the true line.

Over rough mountainous land, covered with scattering scrub cedar and pinon timber.

0.75 Collet Wash, dry, 6 chs. wide, 15 ft. deep, drains N. 80° E.

6.20 Leave Collet Wash; asc. steep adobe slope, covered with loose slide rock.

9.00 Top of steep asc., 140 ft. above wash, bears E. and W.

39.34 Off set one chain W. and set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the W. sec. to the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 29 | S 28
 $\frac{1}{4}$
 W | C
 1913

40.00 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

40.00 True point for $\frac{1}{4}$ sec. cor. falls on steep solid bed rock. Impracticable to establish cor.

Thence I run

N. 0° 03' W., on true line bet. secs. 28 and 29.

Over rocky, broken E. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 20, 21, 28 and 29, with brass cap mkd.

T37S R4E
 S20 | S21

 S29 | S28
 1913

Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Chains.

Land, rough and broken.
Soil, adobe and clay, stony with outcropping of sand stone rock; 4th rate.

Timber, scattering scrub cedar and pinon, with an undergrowth of scattering sage brush. Scant grazing.

November 14, 1913: At this cor. I set off $18^{\circ} 13'$ S. on the decl. arc, and at app. noon, observe the sun on the meridian, the resulting lat. is $37^{\circ} 35'$ N.

East, on random line bet. secs. 21 and 28.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.97 Intersect the N. and S. sec. line 19 lks. S. of the cor. of secs. 21, 22, 27 and 28, previously described.

Thence I run

S. $89^{\circ} 52'$ W., on true line bet. secs. 21 and 28.

Asc. gradually over open flat, covered with dense undergrowth of sage brush.

39.98 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 21
 $\frac{1}{4}$

S 28
1913

Dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

44.00 Foot of spur of ridge, bears N. and S.; asc.

47.00 Spur of ridge, 100 ft. high, projects S.; desc.

51.00 Bottom of dry draw, at foot of spur of ridge, drains S.; continue W. in bottom of ^{another} draw, covered with sage brush and large boulders.

60.00 Leave bottom of draw, drains from the N. to the E.; asc. abruptly over broken E. slope, covered with scattering scrub cedar and pinon timber.

79.97 The cor. of secs. 20, 21, 28 and 29, previously described.
Land, rolling and broken.
Soil, sandy and adobe; 4th rate.

Chains.

Timber, scattering scrub cedar and pinon.

Undergrowth, sagebrush. November 14, 1913.

November 15, 1913: At 7^h 45^m a. m., l. m. t., I set off 37° 35' N. on the lat. arc, 18° 23' S. on the decl. arc, and determine the meridian with the solar, at the cor. of secs. 20, 21, 28 and 29.

Thence I run

N. 0° 03' W., bet. secs. 20 and 21.

Desc. over rough mountainous land, covered with scattering scrub cedar and pinon timber.

- 4.00 Dry draw, 10 lks. wide, 5 ft. deep, drains E.; asc. over a series of small ridges and ravines, draining E.
- 16.20 Dry draw, 10 lks. wide, 6 ft. deep, drains SE; asc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 20	S 21
$\frac{1}{4}$	
1913	

Raise a mound of stone, 4 ft. base, 2 ft. high, w. of cor. Continue over broken mesa, covered with large boulders and scattering scrub cedar and pinon timber.

- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 16, 17, 20 and 21, with brass cap mkd.

T37S R4E	S17	S16
S20	S21	
1913		

from which

A cedar, 8 ins. in diam., bears N. 17° E., 92 lks. dist., mkd. T37S R4E S16 BT.

A cedar, 12 ins. in diam., bears S. 16° E., 24 lks. dist., mkd. T37S R4E S21 BT.

A pinon, 12 ins. in diam., bears S. 41° W., 81 lks. dist., mkd. T37S R4E S20 BT.

A pinon, 12 ins. in diam., bears N. 43° W., 126 lks. dist., mkd. T37S R4E S17 BT.

Subdivision of T. 37 S., R. 4 E.

Chains.

November 15: Noon latitude observation impracticable.
Land, rough and mountainous.

Soil, adobe, clay and stony; 4th rate.

Timber, scrub cedar and pinon. Poor grazing.

November 15, 1913.

Joe E. Shama
U. S. Surveyor.

November 17, 1913: At 8^h 15^m a. m., l. m. t., I set off
37° 36' N. on the lat. arc, 18° 56' S. on the decl.
arc, and determine the meridian with the solar.

Note: In order to facilitate the running of the lines
in this broken country, I run the random line bet.
secs. 16 and 21, S. 89° 52' W., from the cor. of secs.
15, 16, 21 and 22, instead of N. 89° 52' E., the
regular way; therefore, the above solar observation
was made at the cor. of secs. 15, 16, 21 and 22.

S. 89° 52' w., on random line bet. secs. 16 and 21.

Set temp. 1/4 sec. cor.

Intersect the N. and S. sec. line, 2 lks. S. of the cor.
of secs. 16, 17, 20 and 21, previously described.

Thence I run

N. 89° 53' E. on true line bet. secs. 16 and 21.

Desc. over rough mountainous land, covered with scatterig
scrub cedar and pinon timber.

Desc. over barren E. slope, bears N. and S.

Bottom of desc., 335 ft. below sec. cor.; dry draw,
10 lks. wide, 3 ft. deep, drains S. 25° E.

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
the ground for the 1/4 sec. cor., with bass cap mkd.

S 16
1/4

S 21
1913

Dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.,
and raise a mound of earth, 3 ft. base, 1 1/2 ft. high,
N. of cor.

40.00

79.80

0.30

24.30

39.90

Chains.
 68.80 Enter dense scrub cedar and pinon timber, bears N. and S.
 79.80 The cor. of secs. 15, 16, 21 and 22, previously described.
 Land, mountainous and broken.
 Soil, adobe and black clay; 4th rate.
 Timber, scrub cedar and pinon, with little or no under-
 growth. No grazing.

November 17, 1913.

Edward R. Bumbury

U. S. Transitman.

November 15, 1913. I continue my line of

N. 0° 03' W., bet. secs. 16 and 17.

Desc. over mountainous land, devoid of growth.

5.50 Dry draw, 150 ft. below cor., drains SE.; asc.

16.00 Sand stone rim 100 ft. high, bears NE. and Sw., and SE.
and Nw. the line strikes over point.

36.00 Desc. abruptly over broken NE. slope, covered with large
boulders.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in
the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 17	S 16
$\frac{1}{4}$	

1913

Raise a mound of stone, 3 ft. base, $1\frac{1}{2}$ ft. high, w. of
cor.

70.00 Ravine; 90 ft. deep, drains E:

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in
the ground for the cor. of secs. 8, 9, 16 and 17,
with brass cap mkd.

T37S	R4E
S 8	S 9

S17	S16
1913	

Raise a mound of stone, 3 ft. base, $1\frac{1}{2}$ ft. high, w. of
cor.

Land, mountainous and broken.

Chains.

Soil, black clay and adobe and stony; 4th rate.

Timber, scattering scrub cedar and pinon. No grazing.

N. 89° 53' E., on random line bet. secs. 9 and 16.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.00 Set temp. point. (Note: The random was run on this date in order to finish nearer to camp; true line cor. was set on November 17, 5 lks. S. and 15 lks. E of temp. point.

November 15, 1913.

November 17, 1913. S. 89° 55' W., on true line bet. secs. 9&16.

Desc. over rough broken land, covered with dense scrub cedar and pinon timber.

10.00 Ravine, 80 ft. deep, drains N.; asc.

30.00 Dry draw, 10 lks. wide, 3 ft. deep, drains N.; asc.

40.02 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 9

$\frac{1}{4}$

S 16

1913

Raise a mound of stone, 3 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. No bearing trees available.

80.05 The cor. of secs. 8, 9, 16 and 17, previously described. Land, rough and broken.

Soil, dark clay and adobe and stony; 4th rate.

Timber, scrub cedar and pinon. Poor grazing.

November 17, 1913.

November 17, 1913: At 8h 15m a. m., 1. m. t., I set off 37° 36' N. on the lat. arc, 18° 55' S. on the decl. arc, and determine the meridian with the solar, at the cor. of secs. 8, 9, 16 and 17.

N. 0° 03' W., bet. secs. 8 and 9.

Over broken land, covered with scattering scrub cedar and pinon timber, with sage brush undergrowth.

39.00 Dry draw, 15 lks. wide, 5 lks. deep, drains NE.; asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., with brass cap mkd.

S 8 | S 9
 $\frac{1}{4}$

1913

Raise a mound of stone 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Chains.

No bearing trees available.

42.00 Top of asc., bears NE. and SW.; desc.

76.00 Leave scattering scrub cedar and pinon timber, bears NW. and SE., enter open land covered with sage brush.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 4, 5, 8 and 9, with brass cap mkd.

T37S R4E
S 5 S 4

S 8 S 9

from which

1913

A pinon, 12 ins. in diam., bears S. 30° W., 154 lks. dist., mkd. T37S R4E S8 BT.

A pinon, 12 ins. in diam., bears S. 8° E., 119 lks. dist., mkd. T37S R4E S9 BT.

A cedar, 24 ins. in diam., bears N. 65° W., 195 lks. dist., mkd. T37S R4E S5 BT.

Raise a mound of stone, 3 ft. base, 1½ ft. high, W. of cor. No other bearing trees available.

Land, rough and broken.

Soil, sandy, adobe and clay; 4th rate.

Timber, scattering scrub cedar and pinon, with sage brush undergrowth. Poor grazing.

November 17, 1913: At this cor. I set off 18° 58' S. on the decl. arc, and at app, noon, observe the sun on the meridian, the resulting lat. is 37° 37' N.

N. 89° 55' E. on random line bet. secs. 4 and 9.

40.00 Set temp. ¼ sec. cor.

80.00 Set temp. point. (Note: The random was run on this date in order to complete a day's run; true line cor. was set on November 18, 16 lks. N. and 11 lks. E. of temp. pt.

November 17, 1913.

Chains.

November 18, 1913.
S. 89° 48' W., on true line bet. secs. 4 and 9.

Asc. gradually over gently rolling land, covered with sage brush, yellow top and grass.

8.00 Dry draw, 50 lks. wide, 2 ft. deep, drains N.; continue asc.

37.00 Dry draw, 50 lks. wide, 6 ft. deep, drains N. 80° E.

40.05¹/₂ Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the ¹/₄ sec. cor., with brass cap mkd.

S 4
¹/₄

S 9
1913

Raise a mound of stone 3¹/₂ ft. base, 1¹/₂ ft. high, N. of cor.

53.50 Start abrupt asc. over broken rocky slope, covered with dense scrub cedar and pinon timber.

74.00 Leave dense scrub cedar and pinon timber, bears N. and S.; enter level open sage brush flat.

80.11 The cor. of secs. 4, 5, 8 and 9, previously described.
Land rolling.

Soil, sandy, with dark clay subsoil; 2nd rate.

Timber, scrub cedar and pinon, with undergrowth of sage brush, yellow top and grass. Fair grazing.

November 18, 1913.

November 17, 1913.
Thence I run

N. 0° 03' W., on random line bet. secs. 4 and 5.

40.00 Set temp. ¹/₄ sec. cor.

80.20 Intersect the N. bdy. of the twp., 23 lks. W. of the cor. of secs. 4, 5, 32 and 33, previously described.

Thence I run

S. 0° 07' W., on true line bet. secs. 4 and 5.

Asc. over rolling land, covered with dense cedar and pinon timber, with undergrowth of sage brush.

4.20 Top of asc., bears E. and W.; desc.

14.80 Dry draw, 50 lks. wide, 4 ft. deep, drains NE.; asc.

40.20 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for the ¹/₄ sec. cor., with brass cap mkd.

Chains.

S 5 | S 4
 $\frac{1}{4}$ |
 1913

Dig pits, 18x18x12 ins., N. and S. of post, 3 $\frac{1}{2}$ ft. dist., and raise a mound of earth and stone, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

54.20 Asc. rocky N. slope of mesa, bears E. and W.

74.20 Leave dense cedar and pinon timber, bears E. and W.; enter open sage brush flat.

80.20 The cor. of secs. 4, 5, 8 and 9, previously described.

Land, rolling and broken.

Soil, sandy and clay. 4th rate.

Timber, scattering scrub cedar and pinon, with sage brush undergrowth. Poor grazing.

November 17, 1913.

Jos. C. Brown
 U. S. Surveyor.

GENERAL DESCRIPTION:

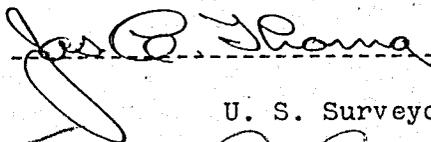
The lands embraced in Secs. 1, 2, 3, 4, 10, 11, 12, 13, 14, and a portion of Sec. 24, are gently rolling and covered with a medium growth of sage brush of a medium height, yellow top and grass, affording fair grazing. The soil is light, reddish sandy loam, with dark gray clay subsoil, which, if water were available for irrigation, would yield good crops. The remainder of the surveyed portion of the township is rough and broken with many ledges and washes. The general slope and drainage of the land is to the east. The soil ranges from a light white sand in the south eastern portion, to adobe and clay along the western border. The central and western portion is particularly rough and broken, and covered with scrub cedar and pinon timber, with an occasional flat open sage brush mesa of small area. The land has little value for grazing purposes, as the grass

is of poor quality and scarce. The timber is of little or no value other than for fire wood and fence posts, and the soil is of such character as to be of little or no value for farming.

No running water was found in the township, in fact, there was only one seep spring of strongly alkali water found at the foot of a sandstone ledge about 15 chs. north of the cor. of secs, 26, 27, 34 and 35.

Skirting the western boundary of the surveyed portion of this township is a series of perpendicular sand stone ledges rising to an average altitude of about 1000 ft. above the surveyed portion, and the land lying to the west of the ledges is rocky and barren, cut with numerous canons from 100 to 1000 ft. in depth.

There is no indication of mineral or oil in this township, neither are there any settlers.



U. S. Surveyor.



U. S. Transitman.

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BOOK A-409

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, ^{and Transitman} ~~and~~ ^{and} C. Thomas, and E. R. Bunbury, U. S. Surveyor ~~and~~ ^{and} during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of Tps. 31 S., Rgs. 2 and 2^H W., T. 34 S., Rgs. 1 and 2^B W.; T. 36 S., Rgs. 3^C and 4^D E. and T. 37 S., R. 4^E E.

of the Salt Lake Base and Meridian, in the State of Utah, which are represented in the foregoing field notes as having been executed by ~~him~~ ^{them}, and under ~~his~~ ^{their} direction; and that said survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>B. J. Kinison</i>	June 9, 1913	Nov. 25, 1913	Chainman
<i>William Wright</i>	June 19, 1913	Nov. 25, 1913	Chainman
<i>W. J. Gavin</i>	June 16, 1913	Nov. 25, 1913	Chainman
<i>H. P. King</i>	Aug. 28, 1913 June 30, 1913	Nov. 21, 1913 Aug. 27, 1913	Chainman. Flagman.
<i>Edward Young</i>	Aug. 28, 1913	Nov. 21, 1913	Flagman
<i>H. H. Peters</i>	June 17, 1913	Nov. 24, 1913	Flagman
<i>Al. Dean</i>	July 24, 1913	Nov. 24, 1913	Axeman
<i>B. J. Carter</i>	Sept. 29, 1913	Nov. 19, 1913	Moundman
<i>Lee Carter</i>	Nov. 3, 1913	Nov. 19, 1913	Moundman
<i>Quley Young</i>	July 1, 1913	Oct. 31, 1913	Moundman

Subscribed and certified to before me on the dates of the final service as shown above.

Geo. C. Thomas
U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

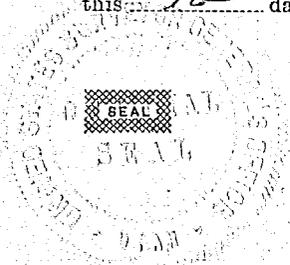
I, Jos. C. Thoma, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Utah and supplemental special instructions dated July 9, 1913, bearing date of the 11th day of June, 1913, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of T. 31 S., Rgs. 2 and 2 1/2 W., Tps. 34 S., Rgs. 1 and 2 W., T. 36 S., Rgs. 3 and 4 E., and T. 37 S., R. 4 East

of the Salt Lake Base and Meridian, in the State of Utah, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Utah and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Jos. C. Thoma
U. S. Surveyor.

Subscribed by said Jos. C. Thoma, and sworn to before me this 11th day of April, 1914

[Signature]
U. S. Surveyor General for Utah



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

191

The foregoing field notes of the survey of

executed by under his special instructions dated 191, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, _____, U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of _____

_____ of the _____ Meridian, in the State of _____ which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	

Subscribed and certified to before me on the dates of the final service as shown above.

U. S. Surveyor.

TRANSITMAN.
FINAL OATH OF UNITED STATES SURVEYOR

I, Edward P. Bunbury, U. S. ~~Surveyor~~ ^{Transitman}, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Utah and supplemental special instructions dated July 9, 1915 bearing date of the 11 day of June, 1913, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of S. and E. bdrs. and subdivision of T. 31 S., R. 2 1/2 W.; E. and N. bdrs. and subdivision T. 34 S. R. 1 W.; E. bdy. and subdivision T. 34 S. R. 2 W.; S. bdy. and subdivision T. 36 S., R. 3 E.; S. and E. bdrs. and subdivision Tps. 36 and 37 S., R. 4 E.; retracement of sixth standard parallel S., R. 2 1/2 W. and of seventh standard parallel S., R. 3 E. of the Salt Lake Base and Meridian, in the State of Utah, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Utah and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Edward P. Bunbury
~~XXXXXX~~
U. S. Transitman

Subscribed by said Edward P. Bunbury, and sworn to before me }
this 19 day of March, 1915



W. C. Hovesen
U. S. Surveyor-General
for Utah.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Salt Lake City, Utah, June 30, 1915

The foregoing field notes of the survey of the subdivisional lines of Township No. 37 South, Range No. 4 East, of the Salt Lake Base and Meridian, Utah,

executed by Joseph C. Thoma and Edward P. Bunbury under ~~his~~ ^{their} special instructions dated June 11, 1913, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

W. C. Hovesen
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

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Site
BOOK A-409
FIELD NOTES

OF THE SURVEY OF THE

SUBDIVISION

AND

RESURVEY

OF

WEST BOUNDARY

T. 17 S., R. 4 E.

Of the Salt Lake Base and Meridian,

in the State of UTAH

EXECUTED BY

Howard W. Miller

&
Thomas C. Rathbone

in the capacity of U. S. Surveyor and Transitman, under instructions dated July 19, 1913,

issued by the United States Surveyor General to govern surveys included in

group No. 25, which were approved by the Commissioner of the General Land

office, August 13, 1913, pursuant to authority contained in the Act of

Congress dated _____, 191_____

Survey commenced September 5, 1913

Survey completed October 18, 1913

Section 3609

INDEX DIAGRAM.

Township 17 South, Range 4 East

6	120	8	86	4	61	3	39	2	19	1
119		117		85		60		37		18
7	115	8	82	9	58	10	35	11	16	12
115		111		81		56		33		15
18	109	17	78	10	55	13	31	14	13	13
107		104		76		51		30		11
19	102	20	75	11	49	22	28	21	9	21
100		98		71		47		26		8
20	95	23	68	25	44	27	24	25	5	25
93		91		67		43		23		4
21	89	22	64	23	41	31	21	25	2	26

Subdivision of T.17 S., R.4 E.

chains

Survey commenced September 5, 1913 and executed with Young and Sons light mountain transits No's. 8584 and 8538, with solar attachment. For description and test of instrument, see book "B" of this survey.

I examine the adjustments of transit No. 8584, and correct the level and collimation errors, then, to test the solar apparatus, by comparing it's indications resulting from solar observations made during a. m. and p. m. hours, with a meridian determined by observations made on Polaris, I proceed as follows:

At my camp which is situated near the $\frac{1}{4}$ sec. cor. between secs. 22 and 23; latitude $39^{\circ} 19' 30''$ N., longitude $111^{\circ} 29' 00''$ W.; I set off $39^{\circ} 19\frac{1}{2}'$ N., on the lat. arc; $6^{\circ} 47'$ N. on the decl. arc; and at 4 h. 28 m. p. m. l. m. t., determine with the solar a meridian, and mark a point thereof, by driving a nail in a hub, set firmly in the ground, 5 chs. N. of my station.

At 6 h. 34 m. p. m., by my watch which carries correct l. m. t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven firmly in the ground, 5 chs. N. of the station.

September 5, 1913

September 6: At 7 h. a. m. l. m. t., I lay off the azimuth of Polaris, $1^{\circ} 29'$ to the west, and note that this meridian falls 0.4 ins. E. of the mark determined by the solar.

At 7 h. 58 m. a. m. l. m. t., I set off $39^{\circ} 19\frac{1}{2}'$ N., on the lat. arc; $6^{\circ} 32'$ N., on the decl. arc; and determine a meridian with the solar. This meridian falls 0.4 ins. E. of the meridian established by the Polaris observation. The solar apparatus by p. m. and a. m. observations, defines positions for meridians, respectively about $0' 21''$ west and $0' 21''$ east of the meridian established by the Polaris observations; therefore I conclude that

Subdivision of T. 17 S., R. 4 E

chains

The magnetic bearing of the true meridian at 8 h. 15 m. a. m. is N. 16° 35' W., the angle thus determined gives the magnetic decl. 16° 35' E.

From the cor. of secs. 1, 2, 35 and 36 on the S. bdy. of the tp. heretofore described.

I run

N. 0° 01' W., bet. secs. 35 and 36

Over rough mountainous land with a general E. exposure, through scattering forest of spruce, balsam fir and aspen and undergrowth of chaparral.

7.03 Wagon road, bears NW. and SE.

36.00 Top of steep descent, bears N. 80° W. and S. 80° E.

Descend abruptly over N. slope.

39.00 Base of steep descent and bench, 100 ft. below top, bears E. and W.

Gradually descend.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S 35 | S 36

$\frac{1}{4}$

1913

from which

A balsam fir, 10 ins. diam., bears N. 72 $\frac{3}{4}$ ° E., 58

lks. dist., marked $\frac{1}{4}$ S 36 B T

A balsam fir, 6 ins. diam., bears S. 19° W., 253

lks. dist., marked $\frac{1}{4}$ S 35 B T

43.50 Spring branch, 3 lks. wide, 2 ins. deep, good water, course NE.

Leave spruce and balsam fir timber, enter opening, bears E. and W.

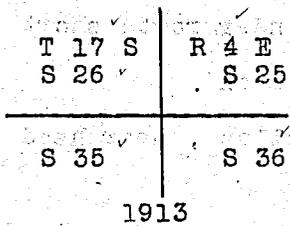
46.15 Spring branch, 3 lks. wide, 3 ins. deep, good water, course N. 60° E.

53.50 Spring branch, 4 lks. wide, 2 ins. deep, good water, course NE.

Subdivision of T. 17 S., R. 4 E.

chains

- 60.15 Enter dense spruce thicket, bears E. and W.
- 62.20 Branch of cottonwood creek, 6 lks. wide, 3 ins. deep, good water, course SE.
- 68.00 Leave spruce thicket, bears E. and W.
- 70.00 Base of steep ascent, bears N. 70° W. and S. 70° E.
Ascend abruptly over S. face of rocky ridge.
- 75.00 Top of steep ascent and S. edge of nearly flat top ridge, bears N. 70° W., and S. 70° E.
Gradually ascend.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 25, 26, 35 and 36, with brass cap marked



from which

- A spruce, 10 ins. diam., bears N. 51½° E., 6.12 chs. dist., marked T 17 S R 4 E S 25 B T
- A spruce, 26 ins. diam., bears S. 20¼° E., 152 lks. dist., marked T 17 S R 4 E S 36 B T
- A spruce, 8 ins. diam., bears S. 19¼° W., 500 lks. dist., marked T 17 S R 4 E S 35 B T

No tree in sec. 26

raise a mound of stone. 2 ft. base, 1½ ft. high, W. of cor.

Land, broken mountainous with a general easterly drainage. General slopes of country, N. on S. 62.20 chs. and S. on N. 17.80 chs.

Soil, decayed vegetation, black loam and some rocky, of a good quality on a hard, moist black loam, gravel and rock sub-soil: 2nd. and 3rd. rate.

Timber, valuable spruce and balsam fir, scattering throughout the mile.

Subdivision of T. 17 S., R. 4 E

chains

Undergrowth, scattering chaparral.

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89° 58' E., on a random line bet. secs. 25 and 36

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.01 Intersect E. bdy. of the tp. at the cor. of sec. 25 , 30 , 31 and 36 , heretofore described.

Thence

N. 89° 58' W., on true line bet secs. 25 and 36.

Over rolling mountain top with a general north drain.

No timber. Undergrowth short mountain grass

Gradually descend.

15.90 Bottom of hollow , near head , 50 ft. below sec. cor., drains N.

Gradually ascend.

38.00 Enter scattering spruce timber, bears N. and S.

Gradually descend.

40.00 $\frac{1}{2}$ In group of large spruce trees:

Set an iron post , 3 ft. long ; 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S 25

$\frac{1}{4}$

S 36

1913

from which

Aspruce , 11 ins. diam., bears N. 3° W., 11 lbs.

dist., marked $\frac{1}{4}$ S 25 B T

A spruce , 13 ins. diam., bears S. 1° W., 8 lbs.

dist., marked $\frac{1}{4}$ S 36 B T

55.00 Leave spruce timber, bears N. and S.

Thence over open land on top of ridge

80.01 The cor. of secs 25 . 26 , 35 and 36

Subdivision of T. 17 S., R. 4 E.

chains

Land , rolling mountain top with a general N. exposure.
Soil , gravelly , stony and rocky mixed with some rich
sandy and black loam , very shallow , on a hard , moist
decayed vegetation , gravelly and rocky sub-soil ; 3rd.
rate.

Timber , spruce and balsam fir of good quality on 37.00
chs.

Little or no undergrowth.

Good grass for grazing purposes.

September 6 : At this sec. cor I set off $6^{\circ} 28'$ N. on
the decl. arc ; and at 11 h. 58 m. a. m. l. m. t. , observe
the sun on the meridian ; the resulting lat. is $39^{\circ} 18'$

September 8 : At 7 h. 58 m. a. m. l. m. t. , I set off $39^{\circ} 18'$
N. , on the latitude arc ; $5^{\circ} 47'$ N. , on the decl. arc ; and
determine a meridian with the solar at the cor. of secs.
25 , 26 , 35 and 36.

Thence I run

N. $0^{\circ} 01'$ W. , bet. secs. 25 and 26

Over open rolling mountain top with an easterly exposure.
Undergrowth, short mountain grass. No timber.

29.80 N. edge of rolling mountain top , bears N. 80° W. and S.
 80° E.

Enter rough mountainous land . Descend abruptly over N.
slope into branch of Cottonwood Canyon.

34.00 Enter dense forest of spruce and balsam fir , bears E.
and W.

37.30 Base of mountain and leave forest of spruce and fir,
100 ft, below top , bears E. and W. Enter large opening.
Gradually descend

40.00 Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins.
in the ground and 12 ins. in a mound of stone and earth
4 ft. base , 1 ft. high for $\frac{1}{4}$ sec. cor. , with brass cap
marked

Subdivision of T.17 S., R.4 E.

chains

from which

A spruce , 10 ins. diam. , bears S. 35 1/4 ° E. , 172 lks. dist. , marked 1/4 S 25 B T

A spruce , 20 ins. diam. , bears S. 12 ° W. , 100 lks. dist. , marked 1/4 S 26 B T

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

From this cor. the chimney in Frank's or the Selley Creek forest ranger's cabin , bears N. 11 ° 52 ' E.

The NW. cor. of stable at cabin bears N. 15 ° 30 ' E.

Thence over open rolling land.

43.10 Wagon road , bears N. 80 ° W. , and S. 80 ° E.

52.49 Wire fence , bears NE, and SW.

52.70 Cottonwood Creek , 50 ft. below 1/4 sec. cor. , 10 lks. wide , 6 to 8 ins. deep , good water , course E.

Gradually ascend across gently rolling pasture land.

60.63 Spring branch , 7 lks. wide , 5 ins. deep , good water , course E.

61.84 Spring branch , 5 lks. wide , 3 ins. deep , good water , course E.

65.20 Spring branch , 4 lks. wide , 2 to 4 ins. deep , good water , flows NE.

65.84 Wagon road , bears N. 59 1/2 ° E. and S. 59 1/2 ° W.

65.89 Telephone line , controlled by the U.S. Forest Service , N. 59 ° 34 ' E. and S. 59 ° 34 ' W.

From this point , the chimney in Frank's cabin , bears N. 60 ° 34 ' E. The NW. cor. of stable bears N. 68 ° 03 ' E.

68.39 Creek , 2 lks. wide , 2 ins. deep , good water , course E.

69.89 Wagon road , bears E. and W.

70.00 Base of mountain ridge , bears E. and W.

Leave open rolling land ; thence up steep ascent through spruce and balsam fir timber.

72.30 Leave timber , bears E. and W.

76.90 Top of S. side of large mountain ridge , 120 ft. above

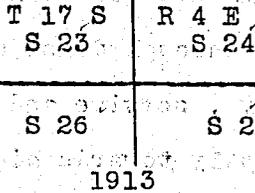
Subdivision of T.17 S., R.4 E.

chains

base, bears E. and W.

Thence over rolling mountain top.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base, 1 ft. high for cor. of secs. 23, 24, 25 and 26, with brass cap, marked



raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Land, rolling and broken mountainous, with a general E. drainage and with steep N. and S. slopes of ridges to Cottonwood Creek.

Soil, on S. 29.40 chs. and N. 4.10 chs. which lies on top of gently rolling ridge tops is a shallow, rich sandy loam and gravelly on a hard, moist, black loam and stony sub-soil; 2 nd. rate. Land between 37.30 chs. and 70.00 chs. lies in a large basin which is drained by Cottonwood Creek which flows in an easterly course., soil, a rich sandy and black loam and some rocky on a deep, hard, moist, black loam and stony sub-soil; 2 nd. rate. Soil of remaining part of mile which lies on steep N. and S. slopes of ridges is generally rocky of very poor quality and can be classed as 4 th. rate.

Timber some valuable spruce and balsam fir.

Undergrowth some short mountain grass

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with undergrowth 80.00 chs.

Subdivision of T. 17 S., R. 4 E.

chains

- S. 89° 58' E., on a random line bet. secs. 24 and 25
- 40.00 Set temp. 1/4 sec. cor.
- 79.94 Intersect the E. bdy. of the tp. 2 lks. S. of the cor. of secs. 19, 24, 25 and 30 heretofore described.
- Thence
- N. 89° 59' W., on true line bet. secs. 24 and 25
- Over rough mountainous land sloping NE. into Big Cottonwood Creek, through dense undergrowth of chaparral, choke cherry, service and willow. No timber.
- Ascend abruptly towards high ridge.
- 18.40 Top of steep ascent 300 ft. above sec. cor., bears N. 70° W. and S. 70° E. Leave undergrowth, enter exceptionally dense spruce and balsam fir timber. Gradually ascend.
- 22.00 Top of rolling top mountain, bears N. 70° W., and S. 70° E. Leave timber.
- Thence over rolling mountain top through short undergrowth of mountain grass.
- 39.97 Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground and 12 ins. in a mound of earth and stone 4 ft. base, 1 ft. high, for 1/4 sec. cor., with brass cap marked

S 24
1/4

S 25

1913

from which

A jack pine, 18 ins. diam., bears S. 10° W., 342 lks. dist., marked 1/4 S 25 B T.

A spruce, 7 ins. diam., bears N. 30 1/4 ° W., 369 lks. dist., marked 1/4 S 24 B T.

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Thence over land sloping gently W.

Subdivision of T. 17 S., R. 4 E.

chains

- 79.94 The cor. of secs. 23, 24, 25 and 26.
 Land, rough mountainous and gently rolling mountain top.
 E. 22.00 chs., rough mountainous land with a general NE.
 exposure. Soil, rocky and decayed vegetation on a
 moist sub-soil of black loam and rocks: 4 th. rate.
 W. 57.94 chs., gently rolling mountain top draining N.
 Soil, light sandy loam and gravelly on a hard moist
 sandy loam and gravelly sub-soil, about 2 ft. deep,
 3 rd. rate.
 Timber dense spruce and balsam fir on 1.60 chs.
 Undergrowth, thick chaparral, choke cherry, service,
 and willow on E. 18.40 chs. Short mountain grass on
 W. 57.94 chs.
 Good grass for grazing purposes.
 Land mountainous heavily timbered or covered with
 dense undergrowth, 79.94 chs.
 September 8: At this sec. cor. I set off $5^{\circ} 43' N.$,
 on the decl. arc; and at 11 h. 58 m. a. m. l. m. t.,
 observe the sun on the meridian; the resulting lat.
 is $39^{\circ} 19'$.
-
- N. $0^{\circ} 01' W.$, bet. secs. 23 and 24
 Over gently rolling land on top of large mountain ridge
 through scattering forest of spruce and balsam fir.
 Undergrowth, short mountain grass.
- 29.40 Top of north side of ridge, bears E. and W.
 Descend abruptly over N. slope of ridge into main
 Cottonwood Canyon.
- 32.40 Enter heavy spruce, balsam fir and pine timber, bears
 E. and W.
- 33.50 Leave timber, enter opening, bears E. and W.
- 40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins.
 in the ground for $\frac{1}{2}$ sec. cor., with brass cap marked

Subdivision of T. 17 S., R. 4 E.

chains

S 23 | S 24
 $\frac{1}{4}$ | $\frac{1}{4}$

1913

from which

A spruce, 26 ins. diam., bears S. $77\frac{3}{4}^{\circ}$ E., 230 lks.
 dist., marked $\frac{1}{4}$ S 24 B T

A spruce, 19 ins. diam., bears N. $8\frac{1}{4}^{\circ}$ W., 223 lks.
 dist., marked $\frac{1}{4}$ S 23 B T

42.20 Leave opening, enter dense timber, bears E. and W.

52.05 Base of descent, 200 ft. below top, bears E. and W.

Leave timber, thence across open bench land.

52.15 NE. cor. of cabin at saw mill, bears N. $66^{\circ}55'$ W.

Chimney on engine at saw mill, bears N. $22^{\circ}24'$ W.

57.00 Wood road, bears NW. and SE.

58.67 NE. cor. of cabin, bears S. $82^{\circ}09'$ W.,

Engine at mill, bears N. $44^{\circ}30'$ W.

60.00 Spring branch, 5 lks. wide, 4 ins. deep, good water,
 course NE.

63.75 Leave bench, bears NW. and SE.

Descend abruptly.

77.00 Spring branch, 2 lks. wide, 1 to 3 ins. deep, good
 water, course S. 85° E., 150 ft. below bench.

Thence over land sloping nearly east.

78.00 Enter scattering aspen and spruce timber, bears E.
 and W.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins.
 in the ground, for cor. of secs. 13, 14, 23 and 24
 with brass cap marked

T 17 S | R 4 E
 S 14 | S 13
 S 23 | S 24

1913

from which

Subdivision of T. 17 S., R. 4 E.

chains

A spruce , 20 ins. diam. , bears N. 33½°E. , 83 lks.
 dist. , marked T 17 S R 4 E S 13 B T

A spruce , 24 ins. diam. , bears S. 26°E. , 34 lks.
 dist. , marked T 17 S R 4 E S 24 B T

A spruce , 8 ins. diam. , bears S. 7¼°W. , 131 lks.
 dist. , marked T 17 S R 4 E S 23 B T

A spruce , 8 ins. diam. , bears N. 47°W. , 63 lks.
 dist. , marked T 17 S R 4 E S 14 B T

Land broken mountainous and rolling with a general NE. exposure.

S. 29.40 chs. rolling land lying on top of a high mountain ridge which bears E. and W. Soil , sandy loam and gravelly , very shallow on a hard , moist sandy loam and stony sub-soil : 3 rd. rate.

N. 50.60 chs. broken mountainous land with a general N. and E. exposure. Soil rocky and decayed vegetation of very poor quality on a rocky sub-soil : 4 th. rate. Timber , valuable spruce , balsam fir and pine. Undergrowth , short mountain grass.

Land mountainous heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89°59'E. , on a random line bet. secs. 13 and 24

40.00

Set temp. ¼ sec. cor.

79.99

Intersect E. bdy. of the tp. 2 lks. N. of the cor. of secs. 13 , 18 , 19 and 24 heretofore described.

Thence

N. 89°58'W. , on true line bet. secs. 13 and 24.

Gradually descend over open rolling mountain top through scattering short undergrowth of sage brush and mountain grass.

17.90

W. edge of rolling mountain top , bears NW. and SE.

Subdivision of T. 17 S., R. 4 E.

chains

Enter dense forest of aspen and scattering spruce timber., and undergrowth of chaparral.

Descend abruptly over SW. face of mountain.

39.99 1/2 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 13

S 24

1913

from which

An aspen, 5 ins. diam., bears N. 54°E., 63 lks. dist., marked 1/4 S 13 B T

An aspen, 4 ins. diam., bears S. 66°W., 77 lks. dist., marked 1/4 S 24 B T.

Continue to descend.

50.00 Base of mountain and steep descent 400 ft. below top and 150 ft. below 1/4 sec. cor., bears NW. and SE.

Leave dense timber., thence through scattering timber gradually descending towards Big Cottonwood Creek.

56.40 Big Cottonwood Creek in canyon, 15 lks. wide, 6 to 10 ins. deep, good water, course SE.

Gradually ascend over gentle E. slope.

60.00 Enter swamp, bears N. and S.

62.50 Swamp extends N. 5 and S. 3 chs.

65.00 Leave swamp, bears N. 20°E. and S.

79.99 The cor. of secs. 13., 14., 23 and 24.

Land, rolling and rough broken mountainous, with a general SE. drain and with SW. and E. slopes.

E. 17.90 chs. and W. 25.60 chs. rolling land of which the E. 17.90 chs. consists of high rolling mountain top and the W. 25.60 chs., low rolling land in bottom of canyon. Soil, rich sandy and black loam, decayed vegetation and some stony of good quality on hard, moist, black loam and rocky sub-soil; 2 nd. rate.

Subdivision of T. 17 S., R. 4 E.

chains

Remainder of mile , rough broken SW. slope of mountain draining into cottonwood canyon. Soil , rocky and decayed vegetation on a moist loam and rocky sub-soil ; 4 th. rate.

Timber , dense aspen and some spruce on 62.09 chs.

Undergrowth , chaparral , sage brush and mountain grass. Good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth 79.99 chs.

September 8 , 1913.

September 9 : At 7h. 57m. a.m. l.m.t., I set off 39° 20' N. on the lat. arc ; 5° 25' N., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 13 , 14 , 23 and 24.

Thence I run

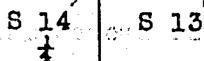
N. 0° 01' W., bet. secs. 13 and 14.

Over rough mountainous land along E. slope of bench in Cottonwood Canyon, through scattering aspen and spruce timber and undergrowth of chaparral.

31.05 Ravine , 30 lks. wide , 15 ft. deep , drains E.

40.00 On E. slope of bench , 100 ft. above sec. cor. and 125 ft. above Cottonwood Creek to the E.

Set an iron post , 3 ft. long , 1 in. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth , 4 ft. base , 1 ft. high , for 1/4 sec. cor., with brass cap marked



1913

Subdivision of T. 17 S., R. 4 E

chains

raise a mound of stone, 2 ft. base, 1 1/2 ft. high W. of cor.

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Begin gradual descent.

61.40

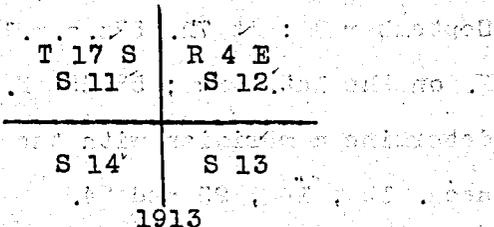
Big cottonwood creek, 10 lks. wide, 6 to 8 ins. deep, good water, course SE.

Begin gradual ascent over S. slope of horse shoe ridge.

80.00

50 ft. above Cottonwood Creek

Set an iron post, 3 ft. long, 2 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base, 1 ft. high for cor. of secs. 11, 12, 13 and 14 with brass cap marked



from which

A spruce, 8 ins. diam., bears N. 62° E., 476 lks. dist., marked T 17 S R 4 E S 12 B T

No tree within limits in sec. 13

A spruce, 6 ins. diam., bears S. 25 1/4° W., 310 lks. dist., marked T 17 S R 4 E S 14 B T

A spruce, 6 ins. diam., bears N. 2 1/2° W., 244 lks. dist., marked T. 17 S R 4 E S 11 B T

raise a mound of stone, 2 ft. base, 1 1/2 ft. high W. of cor.

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Land rolling and broken mountainous; following along E. slope of bench for S. 61.40 chs. and on S. slope of Horse Shoe Ridge for N. 18.60 chs., and having a general drain to the SE.

Subdivision of T. 17 S., R. 4 E.

chains

Soil , stony and rocky mixed with some rich decayed vegetation and black loam on a hard moist black loam and rock sub-soil, very shallow : 3 rd. rate.

Timber , scattering aspen and spruce.

Undergrowth , some chaparral..

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89° 58' E., on a randomline bet. sec. 12 and 13

40.00 Set temp. 1/4 sec. cor.

80.00 Intersect E. bdy. of the tp. 9 lks. S. of the cor. of secs. 7 , 12 , 13 and 18 heretofore described.

Thence

S. 89° 58' W., on true line bet. secs. 12 and 13.

Gradually descend over rolling mountain top , through short undergrowth of sage brush and mountain grass.

21.60 Leave rolling mountain top , enter rough mountainous land , bears N. and S.

Descend abruptly over W. slope.

32.20 Enter heavy spruce balsam fir and some aspen timber,

38.00 Base of steep descent and leave heavy timber , 200 ft. below top , bears N. and S.

Thence gradually descend through scattering timber.

40.00 Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 12
1/4

S 13

1913

from which

A balsam fir , 8 ins. diam., bears S. 25° W., 24 lks.

dist., marked 1/4 S 13 B T

Subdivision of T.17 S., R.4 E.

chains

A balsam fir , 6 ins. diam., bears N.44 $\frac{1}{2}$ °W., 7 lks.

dist., marked $\frac{1}{4}$ S 12 B T

Continue gradual descent.

55.10 Branch of Big cottonwood creek, 12 lks. wide, 6 to 8 ins. deep, 75 ft. below $\frac{1}{4}$ sec. cor., course S.

Ascend

56.80 Spur , 50 ft. high, projects S.

Descend

68.00 Spring branch , 2 lks. wide , 2 ins. deep , good water, course SW.

80.00 The cor. of secs. 11 ,12 , 13 and 14

Land , rolling and broken mountainous with a general S. exposure.

E .21.60 chs. rolling mountain top. Soil , light sandy loam and gravelly of good quality on a hard moist sandy loam and stony sub-soil : 2 nd. rate.

W.58.40 chs. rough mountainous land of which the E. 33.50 chs. lies on the west slope of a high rolling mountain. The remaining part is on the S. slope of horse shoe ridge. Soil , stony and rocky mixed with some rich , sandy loam on a hard , moist decayed vegetation and rocky sub-soil ; 3 rd. rate.

Timber , valuable spruce , balsam fir and some aspen on 47.20 chs.

Undergrowth , chaparral , short sage and mountain grass. Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth 80.00 chs.

N.0°01'W., bet. secs. 11 and 12

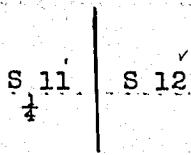
Over mountainous land , gradually ascend over S, face of horse shoe mountain , through scattering spruce and balsam fir timber and scattering undergrowth of chaparral

Subdivision of T. 17 S., R. 4 E.

chains

40.00 100 ft. above sec. cor.

Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor. with brass cap marked



1913

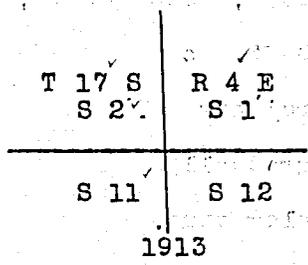
from which

A spruce , 12 ins. diam., bears N. 40 1/2° E., 194 lks. dist., marked 1/4 S 12 B T

A spruce , 10 ins. diam., bears S. 7 1/2° W., 200 lks. dist., marked 1/4 S 11 B T

Continue ascent over S. face of mountain

80.00 Set an iron post , 3 ft. long , 2 ins. in dia., 24 ins. in a mound of stone and earth , 4 ft. base , 2 ft. high , for cor. of secs. 1 , 2 , 11 and 12 , with brass cap marked .



raise a mound of stone , 2 ft. base , 1 1/2 ft. high . W. of cor.

Note: On account of natural obstacles I am unable to set post in the ground.

Land , mountainous , with a general S. exposure.

Soil, rocky and decayed vegetation mixed with some black loam on hard moist black loam and rich sub-soil : 3 rd. rate.

Timber, scattering spruce and balsam fir.

Undergrowth , some chaparral.

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense

Undergrowth 80.00 chs.

Subdivision of T. 17 S., R. 4 E.

chains

September 9 : At this sec. cor. I set off 5° 21' N., on the decl. arc; and at 11 h. 57 m. a.m. l.m.t., observe the sun on the meridian ; the resulting lat. is 39°22', which is the proper lat.

N. 89°58'E., on random line bet. secs. 1 and 12.

40.00 Set temp. 1/4 sec. cor.

80.00 Intersect E. bdy. of the tp. at the cor. of secs. 1, 6, 7 and 12 heretofore described,

Thence S. 89°58'W., on true line bet. secs. 1 and 12.

Over mountainous land draining SW., through scattering spruce timber and undergrowth of shortsage brush.

Gradually descend.

10.00 Spring branch in hollow, 50 ft. below sec. cor., 3 lks. 2 ins. deep, good water, course SW.

Ascend 40 ft. to

14.00 Spur, projects SW.

Descend gradually

40.00 40 ft. below spur.

Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth

4 ft. base, 1 ft. high, for 1/4 sec. cor., with brass cap marked

S 1

S 12

1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high N. of cor.

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

46.20 Spring branch, 2 lks. wide, 2 ins. deep, good water, course SE.

Subdivision of T. 17 S., R. 4 E.

chains

80.00 Thence over land facing S. across numerous small washes.
 The cor. of secs. 1, 2, 11 and 12.
 Land, mountainous with a general S. exposure.
 Soil, gravelly and rocky with some black loam on hard moist, black loam and rocky sub-soil; 3 rd. rate.
 Timber some scattering spruce.
 Undergrowth, short sage brush
 Some good grass for grazing purposes.
 Land, mountainous, heavily timbered or covered with dense undergrowth 80.90 chs.

September 9, 1913.

October 31: At 9 h. 14 m. a. m. 1. m. t. I set off
 39° 22' N., on the lat. arc; 14° 04' S., on the decl.
 arc; and determine a meridian with the solar at the
 cor. of secs. 1, 2, 11 and 12
 Thence I run
 N. 0° 01' W., on a random line bet. secs. 1 and 2

40.00 Set temp. 1/4 sec. cor.

86.76 Intersect N. bdy. of the tp. 14 lks. E. of the cor. of secs. 1, 2, 35 and 36 heretofore described

Thence
 S. 0° 07' E., on true line bet. secs. 1 and 2
 Overvrough mountainous land draining N., through forest of spruce and pine and undergrowth of chaparral and wild goose berry.

15.30 Ascend precipitous N. face of Horse Shoe Ridge.
 Leave timber and undergrowth, bears E. and W.

Thence up series of limestone ledges 5 to 10 ft. high.

23.75 Top of Horse Shoe Ridge and summit of spur of the Wasatch mountains, 500 ft. above sec. cor., 7000 ft. above valley to the west and 12,000 ft above sea level, bears NE. and S. 70° W.

Gradually descend over gentle S. slope of ridge, through

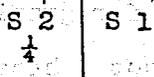
Subdivision of T. 17 S., R. 4 E.

chains

scattering undergrowth of short sage brush.

41.35 Old wagon road , bears N. 60°E. and S. 60°W.

46.76 Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth 4 ft. base , 1 ft. high , for 1/4 sec. cor. , with brass cap marked



1913

raise a mound of stone , 2 ft. base , 1 1/2 ft. high W. of cor. ,

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

77.70 Horse Shoe Irrigation Ditch , 10 lks. wide , flows W.

86.76 250 ft. below diuide

The cor. of secs. 1 , 2 , 11 and 12.

Land broken and rolling mountainous with N. exposure on N. 23.76 chs. and S. exposure on S. 63.00 chs.

N. 23.76 chs. falls on precipitous N. slope of Horse Shoe Ridge or diuide of Wasatch Mountains and has a general N. drainage. Soil , rocky of limestone formation and is mixed with some sand caused by the disintegration of rocks and decayed vegetation on rocky sub-soil : 4 th. rate.

S. 63.00 chs. gentle S. slope from diuide of mountain. Soil , rocky of limestone and basalt formation and mixed with some sand on a rocky sub-soil ; 4 th. rate. This land lies at an elevation of 12,000 ft. above sea level and at a point where vegetation ceases. Owing to the vast amount of rain fall in this vicinity an abundant growth of rich grasses which affords excellent grazing is found in the crevices of the rocks. A large ditch has been built across the face of this mountain from E. to W. for the purpose of catching the surplus rain water

chains

and carrying it across the divide to the valley to the west and used for irrigation purposes.

Timber, valuable spruce and balsam fir on N. 15.30 chs.

Undergrowth chaparral and wild goose berry on N.15.30 chs. and short sage brush on S. 63.00 chs.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 86.76 chs.

October 31, 1913.

September 5: For solar observation see line bet. secs. 35 and 36.

From the cor. of secs. 2, 3, 34 and 35 on the S. bdy. of the tp. heretofore described, I run N.0°01'W., bet. secs. 34 and 35.

Over open rolling land on top of west slope of divide between San Pete and Joseph valley.

Gradually ascend through short growth of mountain grass.

20.00 Top of divide and spur which divides Manti and Ephraim canyons, bears NE. and W.

Note: A low saddle in spur bears W. about 15 chs.

Descend abruptly over NW. slope into head of Ephraim canyon.

33.80 Enter dense forest of spruce and fir, brs. NE. and SW. Thence over land sloping nearly W.

40.00 200 ft. below top of divide.

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor. with brass cap marked

S 34 S 35

1913

from which

Subdivision of T. 17 S., R. 4 E.

chains

A spruce , 10 ins. diam. , bears N. 83 1/2 ° E. , 53 lks. dist. , marked 1/4 S 35 B T

A balsam fir , 8 ins. diam. , bears N. 44 1/4 ° W. , 114 lks. dist. , marked 1/4 S 34 B T

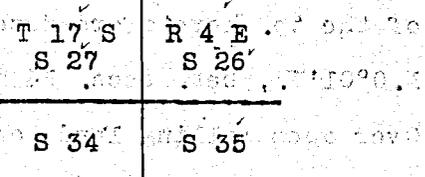
43.00 Spring branch , 3 lks. wide , 2 ins. deep , good water , course NW.

44.00 Leave spruce and fir timber , bears E. and W. Thence over open land in head of Ephraim canyon.

66.24 Spring branch , 2 lks. wide , 2 ins. deep , good water , course NW.

73.30 Spring branch , 3 lks. wide , 2 ins. deep , good water , course NW.

80.00 Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins. in the ground for cor. of secs. 26 , 27 , 34 and 35 with brass cap marked



1913

from which

A spruce , 14 ins. diam. , bears S. 45 ° E. , 335 lks dist. , marked T 17 S R 4 E S 35 B T

A spruce , 10 ins. diam. , bears S. 40 ° W. , 640 lks. dist. , marked T 17 S R 4 E S 34 B T

No trees within limits insecs. 26 and 27.

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , W. of cor.

Land , rolling and broken mountainous lying near the top of the W. slope of divide between San Pete and Joseph valley.

Soil , gavelly , stony and decayed vegetation mixed with some rich black loam on hard , moist black loam and stony sub-soil : 2 nd rate.

Timber , valuable spruce and balsam fir on ll. 20 chs.

Good grass for grazing purposes.

chains

Land mountainous heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89°58'E., on random line bet. secs. 26 and 35

40.00 Set temp. $\frac{1}{4}$ sec. cor..

79.99 Intersect N. and S. line at the cor. of secs 25 , 26 , 35 and 36.

Thence

N. 89°58'W., on true line bet. secs. 26 and 35

Gradually ascend over open rolling mountain top , through short undergrowth of mountain grass.

20.00 Spring branch , 2 lks. wide , 1 in. deep , good water,

Leave rolling mountain top , begin ascent towards top of divide.

39.00 Top of divide between San Pete and Joseph Valleys , 150 ft. above sec. cor. , bears N. 30°E. and S.

Enter scattering forest of spruce , balsam fir and pine. Gradually descend over top of divide.

39.99 $\frac{1}{2}$ Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth 4 ft. base , 1 ft. high , for $\frac{1}{4}$ sec. cor. , with brass cap marked

S 26
 $\frac{1}{4}$

S 35

1913

from which

A balsam fir , 10 ins. diam. , bears S. 85°W. , 169 lks. dist. , marked $\frac{1}{4}$ S 35 B T

A balsam fir , 10 ins. diam. , bears N. 16°W. , 116 lks. dist. , marked $\frac{1}{4}$ S 26 B T

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Subdivision of T. 17 S., R. 4 E.

chains

- 42.10 Leave forest of spruce , balsam fir and pine , bears N. and S.
- 51.00 ~~Wagon road , bears N. and S.~~
- 53.00 Wire fence , bears N. and S.
Thence across enclosed field used by U.S. Experiment station.
- 57.00 Wire fence and leave field , bears N. 70°W. and S. 70°E.
Descend abruptly over W. face of divide into Ephraim Canyon.
- 67.70 Ephraim Creek in hollow , 5 lks. wide , 3 to 5 ins. deep , good water , course NW. Hollow heads about 5 chs. SE.
Thence over land sloping gently NW.
- 71.60 County road , from Ephraim Utah to Emery County , bears NW. and SE.
- 79.99 The cor. of secs. 26 , 27 34 and 35 .
Land , rolling mountainous of which the E. 39.00 chs. lies on the east slope of divide between San Pete and Joseph valley and has a general E. exposure while the W. 40.99 chs. lies on the W. slope of divide and drains W. to San Pete Valley.
Soil , light sandy loam , decayed vegetation and stony on a hard , moist sub-soil of rich black loam and stony: 2 nd. rate.
Timber , good spruce , balsam fir and pine on 3.10 chs. Little or no undergrowth.
Good grass for grazing purposes.
Land mountainous heavily timbered or covered with dense undergrowth 79.99 chs.

September 6 , 1913

September 10 : At 7 h. 57 m. a. m. 1. m. t., I set off 39°18' N., on the lat. arc ; 5° 02' N., on the decl. arc; and determine a meridian with the solar at the cor.

Subdivision of T.17 S., R.4 E.

chains

of secs. 26, 27, 34 and 35

Thence I run

N. 0° 01' W., bet. secs. 26 and 27

Over broken mountainous land in head of Ephraim canyon draining W., through scattering spruce and pine timber and undergrowth of chaparral.

Gradually descend towards Ephraim creek.

.85 County road, from Ephraim, Utah to Emery County, bears NE. and SW.

7.80 Ephraim Creek in wash, 4 lks, wide 4 ins. deep, good water, course NW.

Begin ascent towards divide.

16.00 Wire fence, bears E. and W.

Thence over cultivated field.

19.20 Junction of two telephone lines operated by the U. S. Forest Service, main line, bears N. 80° E. and S. 80° W., the other SE.

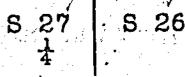
22.21 Wire fence, bears N. 80° E. and S. 80° W.

Begin steep ascent over SW. slope.

25.00 Enter dense undergrowth of service brush.

39.00 Top of divide, 150 ft. above creek, bears NW. and SE. Leave undergrowth, thence across top of divide.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked



1913

from which

A spruce, 8 ins. diam., bears S. 56 $\frac{1}{2}$ ° E., 89 lks.

dist., marked $\frac{1}{4}$ S 26 B T

A spruce, 12 ins. diam., bears S. 37 $\frac{1}{2}$ ° W., 62 lks.

dist., marked $\frac{1}{4}$ S 27 B T

57.40 Top of N side of divide, bears NE. and SW.

Subdivision of T. 17 S., R. 4 E.

CHAINS

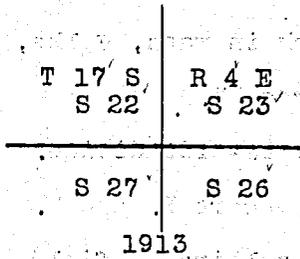
Descend gradually over N. slope into fork of Ephraim Canyon.

60.00 Enter dense spruce and pine timber, bears E. and W.

62.40 Leave dense timber, thence through scattering timber.

80.00 100 ft. below divide.

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in a mound of stone and earth, 4 ft. base, 2 ft. high for cor. of secs. 22, 23, 26 and 27, with brass cap marked



raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Note: On account of natural obstacles I am unable to set post in the ground.

Land, mountainous draining W. and with N. and SW. slopes from divide.

Soil, gravelly, stony and decayed vegetation on hard, moist, decayed vegetation and stony sub-soil: 2 nd. rate.

Timber, spruce and balsam fir and some pine.

Undergrowth, chaparral and service brush.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89°58' E., on a random line bet. secs. 23 and 26.

40.00 Set temp. 1/4 sec. cor.

79.99 Intersect N. and S. line 7 lks. S. of the cor. of sec. 23, 24, 25 and 26

Thence

Subdivision of T. 17 S., R. 4 E.

chains

- S. 89°59'W., on true line bet. secs. 23 and 26.
- Gradually descend over rolling top of ridge through short mountain grass.
- 7.40 Leave ridge, bears NW. and SE.
- Descend abruptly over SW. slope.
- 15.80 Base of ridge, 75 ft. below top, bears NW. and SE.
- Gradually ascend towards high divide over open land sloping S. and E.
- 16.05 Spring branch, 3 lks. wide, 2 ins. deep, good water, course SE.
- 20.00 Spring branch, 2 lks. wide, 2 ins. deep, good water, course SE.
- 39.99½ Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for ¼ sec. cor. with brass cap marked
- S 23
¼

- S 26
1913
- raise a mound of stone, 2' ft. base, 1½ ft. high, N. of cor.
- Begin steep ascent.
- 52.80 Top of divide, between Joseph and San Pete valleys, 100 ft. above ¼ sec. cor., bears N. and S.
- Descend over W. slope into fork of Ephraim Canyon.
- 53.200 Wagon road, bears N. and S.
- 53.50 Enter forest of spruce and pine timber, bears N. and S.
- 68.00 Leave timber, bears N. and S.
- Thence over open land facing almost N.
- 79.99 The cor. of secs. 22, 23, 26 and 27.
- Land mountainous with general S. and SE. slopes on E. 52.80 chs. and W. on W. 27.19 chs.
- Soil, generally a rich decayed vegetation, black loam mixed with some gravel and rocks on a hard moist

Subdivision of T. 17 S., R. 4 E.

chains

decayed vegetation , black loam and gravelly sub-soil ;
2 nd. rate.

Timber , spruce and pine on 12.80 chs.

Undergrowth , short mountain grass ,

Good grass for grazing purposes.

Land , mountainous or heavily timbered 79.99 chs.

N. 0° 01' W. , bet. sec. 22 and 23.

Over mountainous land through scattering forest of
spruce , balsam fir , pine and aspen. , and undergrowth
of chaparral.

Gradually descend.

.85 Spring branch, in head of fork of Ephraim Canyon , 2 lks
wide , 2 ins. deep , good water , course NE.

Thence over land facing E.

15.14 Branch of Ephraim Creek , 75 ft. below sec. cor. , 3 lks.
wide , 3 ins. deep , good water , course NW.

Ascend over SW. slope of divide.

16.00 Enter swamp , bears E. and W.

18.74 Leave swamp , bears E. and W.

40.00 75 ft. above creek.

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
in the ground for 1/4 sec. cor. , with brass cap marked

S 22 S 23

1/4

1913

from which.

An aspen , 9 ins. diam. , bears N. 45° W. , 138 lks.

dist. ; marked 1/4 S 22 B T

A spruce , 24 ins. diam. , bears S. 59 1/2° E. , 358

lks. dist. , marked 1/4 S 23 B T

September 10: At this 1/4 sec. cor. , I set off 4° 58' N. ,

Subdivision of T. 17 S., R. 4 E

chains

on the decl. arc ; and at 11h. 57m. a. m. l. m. t., observe the sun on the meridian: the resulting lat. is 39° 20'.

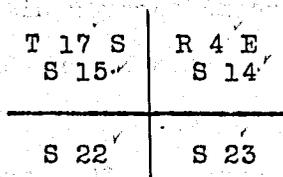
52.50 Top of ascent and divide between San Pete and Joseph valleys, 150 ft. above creek, bears NW. and SE. Thence along top of W. slope of divide.

71.80 Wash, at head of hollow, 10 lks. wide, 2 ft. deep, drains SW.

A reservoir, containing about 1 acre, bears E. about 1 ch.

Gradually ascend

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 14, 15, 22 and 23, with brass cap marked.



1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

From this sec. cor., the NW. cor. of a cabin, bears S. 44° 37' E.

Land, rolling and broken mountainous with a general W. exposure., and lying near the top of the W. slope of divide between San Pete and Joseph Valleys, and is approximately 11,000 ft. above sea level.

Soil, gravelly, stony and rich black loam on a hard, moist sub-soil of gravel and black loam; 2 nd. rate.

Timber, scattering spruce, balsam fir pine and aspen, good for commercial purposes.

Undergrowth, scattering chaparral.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

Subdivision of T. 17 S., R. 4 E.

chains N. 89° 59' E., on a random line bet. secs. 14 and 23

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.00 Intersect N. and S. line 2 lks. S. of the cor. of secs. 13, 14, 23 and 24

Thence S. 89° 58' W., on true line bet. secs. 14 and 23

Over mountainous land facing E., through scattering forest of aspen, spruce and some pine and undergrowth of chaparral and sage brush.

Ascend abruptly over E. slope from cottonwood canyon.

10.00 Top of steep ascent, 100 ft. above sec. cor., bears N. and S.

Leave timber, thence over open rolling bench land.

12.20 Wash, 20 lks. wide, 3 ft. deep, drains SE.

Gradually ascend towards High divide.

39.00 Leave bench, bears N. and S. Ascend

40.00 20 ft. above bench.

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in a mound of stone 4 ft. base, 2 ft. high for $\frac{1}{4}$ sec. cor.; with brass cap marked

S 14

S 23

1913

from which

A spruce, 20 ins. diam., bears S. 52° E., 229 lks. dist., marked $\frac{1}{4}$ S 23 B T

A spruce, 10 ins. diam., bears N. 6 $\frac{1}{2}$ ° W., 457 lks. dist., marked $\frac{1}{4}$ S 14 B T

Note: On account of natural obstacles I am unable to set post in the ground.

44.65 Top of bench, 75 ft. above $\frac{1}{4}$ sec. cor., bears N. and S.

Thence across bench.

52.00 Leave bench, enter heavy spruce and balsam fir timber, bears N. and S.

Subdivision of T. 17 S., R. 4 E.

chains

- Ascend abruptly.
- 55.00 Leave timber, bears N. and S.
- 56.95 Top of E. slope of divide between San Pete and Joseph valleys, 75 ft. above bench, bears NW. and SE. Gradually ascend across divide.
- 69.22 NW. cor. of cabin, bears S, 30° 25' W.
- 72.70 Ditch, 5 lks. wide, drains S. to reservoir.
- 78.00 Wagon road on top of divide, bears NW. and SE.
- 80.00 The cor. of secs. 14, 15, 22, and 23.

Land, rolling and broken mountainous sloping E. from divide of mountain onto several small benches. Soil of bench lands is generally a rich black loam mixed with gravel on a hard moist gravelly and black loam sub-soil; 2 nd. rate. Soil of remaining part is gravelly and rocky on rocky sub-soil; 4 th. rate. Timber, valuable spruce and balsam fir on 13.00 chs. Some aspen timber on E. 10.00 chs. Undergrowth, scattering chaparral and sage brush. Good grass for grazing purposes. Land mountainous, heavily timbered or covered with dense undergrowth 80.60 chs.

September 10, 1913.

September 11: At 7h. 57m. a. m. l. m. t., I set off 39° 20' N., on the lat. arc; 4° 39' N., on the decl. arc; and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23. Thence I run N. 0° 01' W., bet. secs. 14 and 15 Gradually ascend over eastern slope of divide between San Pete and Joseph valleys, through scattering forest

Subdivision of T. 17 S., R. 4 E.

chains

of spruce , pine and balsam fir.

2.00 Wagon road on top of divide, bears NW. and SE.

8.00 Thence over steep E. slope.

19.60 Ditch , 5 lks. wide , drains S. 20° E.

23.49 Ditch , 5 lks. wide , drains SW.

28.10 Ditch , 5 lks. wide , drains SE.

37.35 Base of steep ascent , bears NE. and SW.

Ascend abruptly over SE. slope of divide.

40.00 Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked

S 15	S 14
$\frac{1}{4}$	

1913

raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high W. of cor.

Cor. is situated on SE. slope of divide , 100 ft. above sec. cor.

43.15 Top of divide between San Pete and Joseph valleys , 75 ft. above $\frac{1}{4}$ sec. cor. , bears NE. and SW.

43.50 Wagon road on top of divide , bears NE. and SW.

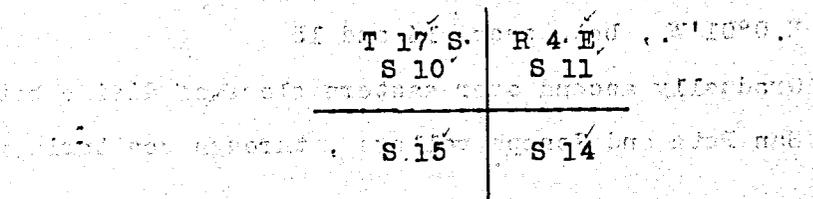
Gradually descend over NW. slope of divide.

44.50 Enter dense spruce and balsam fir timber , bears NE. and SW.

49.50 Leave dense timber , bears E. and W.

Thence gradually descend through scattering timber towards head of fork of Ephraim Canyon.

80.00 Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins. in the ground for cor. of secs. 10 , 11 , 14 and 15 , with brass cap marked



Subdivision of T.17 S., R. 4 E.

chains.

from which

A spruce , 8 ins. diam. , bears N.42½°E. , 95 lks.
dist. , marked T 17 S R 4 E S 11 B T

No tree within limits in sec. 14.

A spruce , 10 ins. diam. , bears S.53¼°W. , 41 lks.
dist. , marked T 17 S R 4 E S 15 B T

A spruce , 7 ins. diam. , bears N.43°W. , 38 lks.
dist. , marked T 17 S R 4 E S 10 B T

raise a mound of stone , 2 ft. base , 1½ ft. high , W.
of cor..

Land , mountainous with E. and W. slopes from divide
of mountain which separates San Pete and Joseph valley.
Elevation about 11,000 ft.

Soil , gravelly and stony mixed with some decayed
vegetaion on a hard , moist , rich gravel and black
loam ; sub-soil ; 2 nd rate.

Timber , scattering spruce , pine , balsam fir and a
few aspen. , good for commercial purposes.

Undergrowth , some sage and chaparral.

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense
undergrowth 80.00 chs.

N. 89° 58' E. , on a random line bet. secs. 11 and 14.

40.00 Set temp. ¼ sec. cor.

79.91 Intersect N. and S. line at the cor. of secs. 11 , 12 ,
13 and 14

Thence

S. 89° 58' W. , on true line bet. secs. 11 and 14

Over rolling mountainous land draining S. , through
scattering forest of spruce and fir and short under-
growth of chaparral

Subdivision of T. 17 S., R. 4 E.

chains.

- Gradually descend
- 3.37 Big Cottonwood Creek , 10 lks. wide , 6 to 8 ins. deep, good water , course SE.
- Thence over land facing S.
- 17.95 Spring branch , 4 lks. wide , 3 ins. deep , good water, course SE.
- Gradually ascend over series of small benches.
- 25.56 Base of bench , bears N. and S.
- Ascend abruptly.
- 29.30 Top of bench , 50 ft. above base , bears N. and S.
- Thence over nearly level land.
- 39.95 $\frac{1}{2}$ Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground , and 12 ins. in a mound of stone and earth , 4 ft. base , 1 ft. high for $\frac{1}{4}$ sec. cor. , with brass cap marked
- S 11
- S 14
- 1913
- raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , N. of cor.
- Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.
- 51.30 Base of steep ascent , bears N. and S.
- Ascend abruptly over E. face of divide.
- 59.21 Wagon road , bears N. and S.
- 60.71 Top of east slope of divide between San Peter and Joseph valley , 350 ft. above Big Cottonwood Creek , bears N. and S.
- Thence over nearly level land on top of divide.
- 64.00 W. edge of divide , bears NE. and SW.
- Descend over gentle W. slope , 50 ft. to
- 79.91 The cor. of secs. 10 , 11 , 14 and 15

Subdivision of T. 17 S., R. 4 E.

chains

Land , rolling and broken mountainous with a general S. and E. exposure from high divide on E. 60.71 chs. and W. exposure on W. 19.20 chs.

Soil , on benches on E. and W. slopes of divide is generally a rich decayed vegetation and black loam mixed with a considerable amount of gravel , on a hard , moist sub-soil of decayed vegetation and rocks ; 2nd. rate. Soil , of remaining part is stony and rocky and unfit for any purpose ; 4th. rate.

Timber , scattering spruce and fir.

Undergrowth , short chaparral.

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth 79.9D chs.

N. 0° 01' W., bet. secs. 10 and 11.

Over broken and rolling mountainous land along top of W. slope of divide between San Pete and Joseph valleys . Gradually descend through scattering spruce and balsam fir timber and undergrowth of chaparral.

8.05 Spring branch in head of fork of Ephraim canyon , 2 lks. wide , 1 in. deep , good water , course NW.

9.00 Spring branch , 2 lks. wide , 3 ins. deep , good water, course NW.

Ascend.

17.22 Top of ascent and edge of rolling ridge , 170 ft. above creek , bears NW. and SE.

Thence over land sloping almost W.

40.00 Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth 4 ft. base , 1 ft. high for $\frac{1}{4}$ sec. cor. , with brass cap marked

Subdivision of T. 17 S., R. 4 E.

chains

S 10
 $\frac{1}{4}$

S 11

1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high W. of cor.,

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground;

September 11: At this $\frac{1}{4}$ sec. cor. I set off 4° 35' N., on the decl. arc; and at 11 h. 57 m. a.m. l.m. t., observe the sun on the meridian; the resulting lat. is 39° 21'.

42.00 Top of N. edge of ridge, bears E. and W.

Descend abruptly into canyon,

64.22 Bottom of canyon, 200 ft. below ridge, drains NW. Ascend abruptly.

78.76 Top of spur, 150 ft. above canyon, projects W. Descend

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 2, 3, 10 and 11, with brass cap marked

T 17 S	R 4 E
S 3	S 2
S 10	S 11

1913

from which

An aspen, 20 ins. diam., bears N. 5 1/2° E., 166 lks. dist., marked T 17 S R 4 E S 2 B T

An aspen, 8 ins. diam., bears S. 9 1/2° E., 124 lks. dist., marked T 17 S R 4 E S 11 B T

An aspen, 8 ins. diam., bears S. 10 1/2° W., 119 lks. dist., marked T 17 S R 4 E S 10 B T

An aspen, 9 ins. diam., bears N. 75 1/2° W., 100 lks. dist., marked T 17 S R 4 E S 3 B T

Subdivision of T.17 S., R.4 E.

chains

Land, rolling and broken mountainous lying near the top of divide of mountain which divides San Pete and Joseph valleys. Elevation about 11,000 ft.. General drainage to the west.

Soil, generally a rich black loam and gravelly with occasionally outcroppings of rocks on a hard, moist sub-soil of black loam and rocks; 3 rd. rate.

Timber, scattering spruce, balsam fir and some aspen.

Timber good for commercial purposes.

Undergrowth, scattering chaparral.

Good grass for grazing purposes.

Land, mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

N. 89° 58'E., on a random line bet. secs. 2 and 11

40.00

Set temp. $\frac{1}{4}$ sec. cor.

79.84

Intersect N. and S. line at the cor. of secs. 1, 2, 11 and 12.

Thence I run

S. 89° 58' W., on true line bet. secs. 2 and 11.

Over broken mountainous land facing nearly S., through short undergrowth of sage brush and chaparral

Gradually descend.

12.80

Spring branch, 5 lks. wide, 4 ins. deep, good water, course S.

13.00

Base of steep ascent, bears N. and S.

Ascend abruptly over E. slope of divide.

18.00

Horse Shoe Irrigation Ditch, bears N. and S.

26.35

Top of divide between San Pete and Joseph valleys, 200 ft. above sec. cor. and approximately 11,500 ft. above sea, bears N. and SW.

Enter scattering forest of spruce and aspen.

Descend gradually over W. slope of divide.

Subdivision of T. 17 S., R. 4 E.

- chains
- 34.00 Wagon road , bears N. 10E. and S. 10°W.
- 37.84 Horse Shoe Irrigation Ditch , bears N. and S. Drains N.
Enter exceptionally dense undergrowth of wild goose
berry brush, bears N. and S.
Descend abruptly into head of N. fork of Ephraim canyon.
- 39.92 100 ft. below divide.
Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked
S 2
 $\frac{1}{4}$
S 11
1913
raise a mound of stone , 2 ft. base , $1\frac{1}{2}$ ft. high , N.
of cor.
- 50.15 Base of steep descent , 175 ft. below $\frac{1}{4}$ sec. cor. , bears
NW. and SE.
- 51.15 Head of canyon , drains NW.
Ascend abruptly over eastern slope.
- 67.00 Top of spur , 75 ft. above canyon , projects NW.
Thence descend over land sloping nearly W.
- 75.30 Leave scattering aspen timber , bears N. and S.
- 79.84 The cor. of secs. 2 , 3 , 10 and 11.
Land , rolling and broken mountainous with a general
S. and E. exposure from divide between San Pete and
Joseph valleys on E. 23.35 chs. and W. on W. 56.49
chs.
Soil , generally rocky and gravelly mixed with some
rich black loam on a hard , moist sub-soil of rocks
and loam ; 3 rd. rate.
Timber , scattering spruce and aspen. Land lies mostly
above timber line.
Undergrowth , chaparral , sage and wild goose berry
brush.
Some good grass for grazing purposes.
Land mountainous heavily timbered or covered with dense
undergrowth 79.84 cha.

Subdivision of T. 17 S., R. 4 E

chains

September 11, 1913.

Howard Miller

U. S. Surveyor.

October 15: For solar observation see line bet. secs. 3 and 10.

At the cor. of secs. 2, 3, 10 and 11, I set off 8° 30' S. on the decl. arc; and at 11h. 46m. a. m. l. m. t., observe the sun on the meridian; the resulting lat. is 39° 22'.

Thence I run

N. 0° 01' W., on a random line bet. secs. 2 and 3.

40.00 Set temp. 1/2 sec. cor.

Cease work.

October 15, 1913.

October 16: At 8h. 16m. a. m. l. m. t., I set off 39° 22' N., on the lat. arc; 8° 48' S., on the decl. arc; and determine a meridian with the solar at this temp. 1/2 sec. cor.

Thence I continue

N. 0° 01' W.

86.82 Intersect N. bdy. of the tp. 9 lks. E. of the cor. of secs. 2, 3, 34 and 35 heretofore described.

Thence

S. 0° 05' E., on true line bet. secs. 2 and 3.

Over mountainous land with a general NW. exposure, through short undergrowth of choke cherry.

Gradually ascend.

18.95 Horse Shoe Ditch, 6 lks. wide, flows NW.

21.95 Ascend more rapidly.

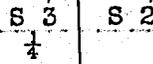
37.70 Top of S. side of bench, bears E. and W. Descend gradually.

Enter dense buck and choke cherry brush, bears E. and W.

Subdivision of T. 17 S., R. 4 E.

chains

46.82 Set an iron post, 3 ft. long, 1 in. in dia., 2 1/2 ins. in a mound of stone and earth, 4 ft. base, 2 ft. high for 1/4 sec. cor., with brass cap marked



1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Note: On account of natural obstacles I am unable to set post in the ground. Begin steep descent.

58.80 Leave choke cherry undergrowth, enter dense forest of aspen and some spruce, bears E. and W.

66.80 Bottom of N. fork of Ephraim Canyon and Creek, 5 lks. wide, 2 ins. deep, good water, course W.

Ascend abruptly over NW slope.

86.82 200 ft. above creek.

The cor. of secs. 2, 3, 10, and 11.

Land rough and broken mountainous draining W., with steep N., NW. and S. slopes into canyons.

Soil, gravelly and rocky mixed with some decayed

vegetation and black loam on a hard, moist rocky and rich dirt sub-soil; 3 rd. rate.

Timber, aspen and some spruce on S. 28.00 chs.

Undergrowth dense buck and choke cherry brush.

Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth 86.82 chs.

October 16, 1913.

Thos. C. Rathbone

U. S. Transitman.

Subdivision of T. 17 S., R. 4 E.

chains

September 12 : At 7 h. 56 m. a. m. 1. m. t. ., I set off 39° 17' N., on the lat. arc ; 4 ° 16' N., on the decl arc ; and determine a meridian with the solar at the cor. of secs. 3 , 4 , 33 and 34 on the S. bdy. of the tp. heretofore described.

Thence I run

N. 0° 02' W., bet. secs. 33 and 34

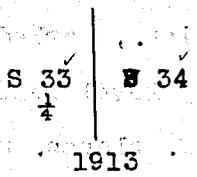
Over rough mountainous land having a general SW. drainage Descend abruptly over N. slope into N. fork of Manti Creek , through scattering forest of spruce and undergrowth of mountain grass.

16.50 Base of descent and N. fork of Manti Creek in canyon, 6 lks. wide , 2 ins. deep , good water, 150 ft. below sec. cor., course SW.

Ascend abruptly over S. face of divide between Manti and Ephraim Canyons.

31.67 Spring branch , 2 lks. wide , 1 in. deep , good water , course SE.

40.00 On top of divide between Manti and Ephraim canyons , 250 ft. above N. fork Manti Creek . bears NW. and SE Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for ¼ sec. cor., with brass cap marked



raise a mound of stone ; 2 ft. base , 1½ ft. high , W. of cor.

41.00 Begin steep descent over N. slope of divide.

55.26 Base of steep descent , 100 ft. below top , bears NE. and W.

Thence over nearly level bench land.

65.25 Leave bench , bears E. and W.

Enter dense forest of spruce and balsam fir.

Subdivision of T. 17 S., R. 4 E.

chains

- Descend gradually over N slope.
- 71.60 Base of descent , 50 ft. below top , bears E. and W
leave dense timber , thence over nearly level bench
through scattering timber.
- 79.00 Leave bench , bears E. and W.
Descend abruptly.
- 80.00 Set an ironpost , 3 ft. long , 2 ins. in dia. , 24 ins.
in the ground for cor. of secs. 27 , 28 , 33 and 34
with brass cap marked.

T 17 S R 4 E
S 28 S 27

S 33 S 34

1913

from which

A spruce , 10 ins. diam. , bears N. $31\frac{1}{2}^{\circ}$ E. , 302 lks.
dist. , marked T 17 S R 4 E S 27 B T.

A spruce , 17 ins. diam. , bears S. $16\frac{1}{2}^{\circ}$ E. , 66 lks.
dist. , marked T 17 S R 4 E S 34 B T

A balsam fir , 8 ins. diam. , bears S. $15\frac{3}{4}^{\circ}$ W. , 86
lks. dist. , marked T 17 S R 4 E S 33 B T

A spruce , 15 ins. diam. , bears N. $10\frac{3}{4}^{\circ}$ W. , 156 lks.
dist. , marked T 17 S R 4 E S 28 B T

Land , nearly level benches and rough mountainous with
steep N. and S. slopes. General drainage SW. on S. 40.00
chains and NW. on N. 40.00 chs.

Soil of bench lands is generally a rich black loam
and gravelly on a hard moist sub-soil of black loam
and gravel. , 2 nd. rate. Remaining portion of mile
is generally rocky and covered with a very shallow
black loam soil on a sub-soil of hard , moist loam ,
mixed with gravel and rocks. 3 rd. rate.

Timber , scattering spruce and balsam fir.
Undergrowth scattering short chaparral and mountain

Subdivision of T. 17 S., R. 4 E.

chains

grass.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

S. 89° 58'E., on a randomline bet. secs. 27 and 34

40.00 Set temp. 1/4 sec. cor.

79.96 Intersect N. and S. line at the cor. of secs. 26, 27, 34 and 35.

Thence

N. 89° 58'W., on true line bet. secs. 27 and 34.

Over broken mountainous land in head of Ephraim Canyon.

Descend over western slope through scattering undergrowth of short mountain grass.

1.00 County road, from Ephraim Utah to Emery County, bears NE. and SW.

9.11 Same road at S. end of dug way, bears N. and SE.

11.94 Base of descent, 100 ft. below sec. cor., bears N. and S
Thence over nearly level land in fork of Ephraim Canyon.

16.90 Spring branch, 3 lks. wide 2 ins. deep, good water, course NW.

18.90 Spring branch, 5 lks. wide, 2 to 4 ins. deep, good water, course N.

19.90 Leave level land, ascend abruptly over E. face of bench.

26.75 Top of bench, 75 ft. above creek, bears N. and S.
Gradually ascend across bench

39.98 Set an iron post, 3 ft. long, 1 in. in dia., 2 1/2 ins. in the ground, for 1/4 sec. cor., with brass cap marked

S 27

S 34

Subdivision of T. 17 S., R. 4 E.

chains

dig pits , 18 x 18 x 12 ins. , E. and W. of post , 3 ft. dist. , raise a mound of earth , $3\frac{1}{2}$ ft. base , $1\frac{1}{2}$ ft. high , N. of cor.

40.96 Spring branch , 2 lks. wide , 1 in. deep , good water , course NW.

60.00 Enter scattering spruce and balsam fir timber , bears NW. and SE.

72.55 Spring branch , 3 lks. wide , 2 ins. deep , good water , course NW.

79.96 100 ft. above the $\frac{1}{4}$ sec. cor.

The cor. of secs. 27 , 28 , 33 and 34.

Land , rolling and broken mountainous sloping W. and NE. to Ephraim Canyon.

Soil , gravelly , decayed vegetation and rocky on a hard moist sub-soil of rich black loam mixed with gravel ; 2 nd. rate.

Timber , scattering spruce and balsam fir.

Undergrowth , short mountain grass.

Good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth , 79.96 chs.

September 12 : At this sec. cor. I set off $4^{\circ} 12' N.$, on the decl. arc. ; and at 11 h. 56 m. a. m. l. m. t. , observe the sun on the meridian ; the resulting lat. is $39^{\circ} 18'$

N. $0^{\circ} 02' W.$, bet. secs. 27 and 28.

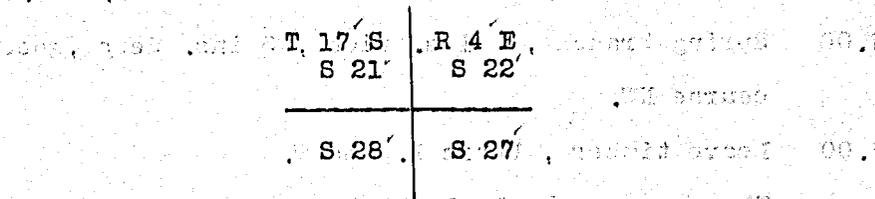
Over rolling mountainous bench land , sloping and draining NE. to Ephraim canyon , through scattering forest of spruce and balsam fir and undergrowth of short chaparral.

Gradually descend.

- chains
- 2.60 Enter dense spruce and balsam fir timber, brs. E. and W.
- 7.00 Spring branch , 4 lks. wide , 3 ins. deep , good water ,
course NW.
- 9.00 Leave timber , bears E. and W.
Thence over nearly level bench land.
- 40.00 Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked
- | | |
|------|------|
| S 28 | S 27 |
| 1913 | |
- dig pits , 18 x 18 x 12 ins. , N. and S. of post , 3 ft.
dist. , raise a mound of earth , $3\frac{1}{2}$ ft. base , $1\frac{1}{2}$ ft.
high , W. of cor.
- 45.50 Leave bench bears N. 80°W. and S. 80°E.
Descend abruptly over precipitous N. slope into Ephraim
Canyon.
- 46.50 Enter exceptionally dense forest of spruce , balsam fir ,
pine and some aspen.
- 72.29 Bottom of Ephraim Canyon and Creek , 20 lks. wide , 3 to
6 ins. deep , good water , 960 ft. below bench , course
NW.
Ascend abruptly.
- 74.29 Spur, 50 ft. above creek , projects W.
Descend gradually into small hollow.
- 79.00 Telephone line , controlled by the U. S. Forest Service ,
bears N. 53°W. and S. 53°E.
- 80.00 Small hollow , 30 ft. below spur , drains SW.
Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins.
in a mound of stone and earth , 4 ft. base , 2 ft.
high , for cor. of secs. 21 , 22 27 and 28 with brass
cap marked

Subdivision of T. 17 S., R. 4 E.

chains



1913

from which

An aspen, 8 ins. diam., bears N. $16\frac{1}{2}^{\circ}$ E., 80 lks.

dist., marked T 17 S R 4 E S 22 B T

An aspen, 8 ins. diam., bears S. $38\frac{1}{2}^{\circ}$ E., 121 lks.

dist., marked T 17 S R 4 E S 27 B T

An aspen, 9 ins. diam., bears S. $73\frac{3}{4}^{\circ}$ W., 72 lks.

dist., marked T 17 S R 4 E S 28 B T

An aspen, 12 ins. diam., bears N. 8° W., 80 lks.

dist., marked T 17 S R 4 E S 21 B T

Note : On account of natural obstacles I am unable to set post in the ground.

Land, rolling bench land sloping gently NE., and rough mountainous land with steep N. and S. slopes into canyon.

Soil, gravelly and decayed vegetation mixed with some rocks on moist, hard decayed vegetation and rocky sub-soil ; 3 rd. rate.

Timber, valuable, spruce, balsam fir, pine and aspen. Scattering timber on S. 46.50 chs., exceptionally dense on next 25.79 chs. and scattering aspen and a few fir on N. 7.71 chs.

Undergrowth, chaparral.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

September 12, 1913.

Subdivision of T. 17 S., R. 4 E.

chains

September 13 : At 7 h. 56 m. a. m. l. m. t., I set off 39° 19' N., on the lat. arc ; 3° 53' N., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 21 , 22 , 27 and 28.

Thence I run

S. 89° 58' E., on a random line bet. secs. 22 and 27

40.00 Set temp. 1/4 sec. cor.

79.97 Intersect N. and S. line 3 lks. S. of the cor. of secs. 22 , 23 , 26 and 27.

Thence

N. 89° 59' W., on true line bet. secs. 22 and 27.

Over open mountainous land sloping N. and NE. to fork of Ephraim Canyon , through short undergrowth of mountain grass.

Descend.

.90 Spring branch , in head of fork of Ephraim Canyon , 1 lk. wide , 1 in. deep , good water , course NE.

Gradually ascend over eastern slope of ridge , extending from high divide of mountain.

24.72 Top of N. slope of ridge , 100 ft. above sec. cor., bears NW. and SE.

Thence over nearly level land on top of ridge.

29.70 Begin descent over SW. slope of ridge.

39.98 50 ft. below top of ridge , on gentle W. slope.

Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 22
1/4

S 27

1913

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , N. of cor.

Subdivision of T.17 S., R.4 E.

chains

48.34 Top of steep descent, bears NW. and SE.
 Descend abruptly over SW. slope into Ephraim Canyon.

49.00 Enter exceptionally dense forest of aspen, spruce and balsam fir.

61.70 Enter dense undergrowth, of service, choke cherry, and chaparral.

76.59 County road, from Ephraim, Utah to Emery County, at a point in dug way, bears NW. and S.
 Leave exceptionally dense timber.

Descend abruptly into small hollow or basin.

79.97 800 ft. below $\frac{1}{4}$ sec. cor.
 The cor. of secs. 21, 22, 27 and 28.
 Land rolling and rough mountainous land,

E. 29.70 chs. rolling mountainous land with N. and NE. exposures from high ridge and draining N. into Fork of Ephraim Canyon. Next 18.64 chs. gentle W. and SW. slopes of top of ridge into Ephraim Canyon. W. 31.63 chs. steep SW. slope of mountain, facing and draining SW. into main fork of Ephraim Canyon.

General drainage of entire mile NW..

Soil, gravelly, decayed vegetation and rocky on a hard, moist sub-soil of rich black loam and rocks; 3 rd. rate.

Timber, dense aspen, spruce and balsam fir on W. 30.97 chs.. Good for commercial purposes.

Undergrowth, short mountain grass on E. 61.70 chs., and dense service, choke cherry and chaparral on W. 18.27 chs.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth, 79.97 chs.

September 13: The sky is overcast at noon; observations for lat. are impossible.

Subdivision of T. 17 S., R. 4 E.

chains.

Continuous storm of rain in p. m. , prevents field work for the remainder of this day.

September 13th, 1913.

Howard W. Miller

U. S. Surveyor.

September 15 : At 7 h. 55 m. a. m. l. m. t. , I set off $39^{\circ} 19' N.$, on the lat. , arc ; $3^{\circ} 08' N.$, on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 21 , 22 , 27 and 28

Thence I run

$N. 0^{\circ} 02' W.$, bet. secs. 21 and 22.

Over rough mountainous land facing and draining SW. and W. into Ephraim Canyon , through forest of aspen , some spruce and balsam fir , and dense undergrowth of chaparral and some service brush.

Ascend. gradually

- 2.00 Enter dense aspen timber , bears E. and SW.
- 2.20 Spring branch , 2 lks. wide , 1 in. deep , good water , course SW.
- 2.88 County wagon road , from Ephraim , Utah to Emery County , bears E. and W.
- 12.87 Spring branch , 4 lks. wide , 2 ins. deep , good water , course W.
Ascend more gradually.
- 17.85 Spur , projects W.
Descent.
- 18.60 , Spring branch , 4 lks. wide , 1 in. deep , good water , course W.
- 22.48 Spring branch , 5 lks. wide , 2 ins. deep , good water , course W.
- 25.00 Ascend abruptly.

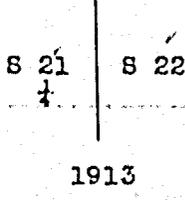
Subdivision of T. 17 S., R. 4 E.

chains

37.71 Top of ridge spur, 150 ft. above sec. cor., bears NW, and SE.

Thence over land facing almost W.

40.00 Set an iron post, 3 ft. long, 1 in. dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked



from which

An aspen, 9 ins. diam., bears N. 67° E., 13 lks. dist., marked 1/4 S 22 B T

An aspen, 8 ins. diam., bears S. 79° W., 22 lks. dist., marked 1/4 S 21 B T

45.00 Leave aspen timber, bears E. and W.

50.96 Begin abrupt descent over land facing N. into fork of Ephraim Canyon.

68.50 Bottom of canyon and branch of Ephraim Creek, 12 lks. wide, 4 to 6 ins. deep, good water, 200 ft. below spur, course W.

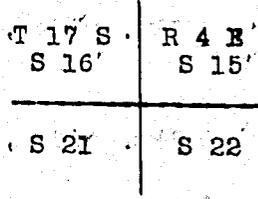
68.80 Begin steep ascent over S. and SW. face of high point.

75.00 Enter dense scrub aspen, bears E. and W.

78.00 Leave aspen, bears NE. and SW.

80.00 On west slope of high mountain point, 850 ft. above creek.

Set an iron post, 3 ft. long, 2 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base, 1 ft. high, for cor. of secs. 15, 16, 21 and 22 with brass cap marked



1913

Subdivision of T. 17 S., R. 4 E.

chains

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , W. of cor.

Note : On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Land rolling and rough broken mountainous with a general W. and SW. exposure., and draining W. into Ephraim Canyon.

Soil , generally rocky and gravelly and mixed with rich decayed vegetation and black loam ; on a hard , moist black loam and rock sub-soil ; 3 rd. rate.

Timber , aspen , spruce and balsam fir of good quality. Undergrowth , dense chaparral , service , willow and sun berry.

Good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 80.00 chs.

September 15 : At this sec. cor. I set off 3° 03' N., on the decl. arc; and at 11 h. 55 m. a.m.l.m.t., observe the sun on the meridian ; the resulting lat., is 39° 20'.

S. 89° 59' E., on a random line, bet. secs. 15 and 22.

Set temp. 1/4 sec. cor.

Cease work.

September 15 , 1913.

September 16 : At 7 h. 25 m. a. m. l. m. t., I set off 39° 20' N. on the lat. arc ; 2° 46' N., on the decl. arc ; and determine a meridian with the solar at this temp. 1/4 sec. cor.

Thence I continue

S. 89° 59' E., on random line.

Intersect N. and S. line at the cor. of secs. 14 , 15 , 22 and 23.

40.00

79.90

Subdivision of T. 17 S., R. 4 E.

chains

Thence N. 89°59'W., on true line bet. secs. 15 and 22.
Over open rolling mountain top sloping gently SW.,
through scattering short undergrowth of mountain grass.
Gradually descend.

3.20 Spring branch, 1 lk. wide, .1 in. deep, good water,
course S.

Gradually ascend.

29.00 Leave rolling mountain top, bears NW. and SE.
Enter thick undergrowth of sun berry, buck, service
and some oak brush.

Descend over land sloping nearly W. into canyon.

35.75 Enter scattering spruce, balsam fir, pine and aspen
timber, bears N. and S.

39.95 100 ft. below top of mountain.
Set an iron post, 3 ft. long, 1 in. in dia., 24 ins.
in the ground, for 1/4 sec. cor., with brass cap marked

S 15

S 22

1913

from which

An aspen, 14 ins. diam., bears N. 42 1/2° E., 43 lks.
dist., marked 1/4 S 15 B T

A pine, 22 ins. diam., bears S. 60 1/2° E., 33 lks.
dist., marked 1/4 S 22 B T

Descend abruptly over W. slope into canyon.

50.85 Leave timber, bears NW. and SE.

55.35 Enter dense aspen timber, bears N. and S.

58.37 Base of steep descent, 200 ft. below 1/4 sec. cor.,
bears N. and S.

Thence over land facing S.

60.47 Creek, 10 lks. wide, 4 to 6 ins. deep, good water,
course SW.

62.92 Creek, 10 lks. wide 3 to 6 ins. deep, good water,

Subdivision of T. 17 S., R. 4 E.

chains

course S.

63.07

Base of steep ascent , bears NE. and SW. .

Ascend abruptly over steep SE. face of high point , through dense undergrowth of buck brush and willow.

73.86

Top of S. edge of high point of divide of Wasatch mountains , 250 ft. above creek.

Descend.

75.50

Leave aspen timber , bears N. and S.

79.90

The cor. of secs. 15 , 16 , 21 and 22.

Land rolling mountain top and rough mountainous.

E. 28.98 chs. , rolling top of mountain and divide between San Pete and Joseph valleys . Elevation about 11,000ft. above sea level. Soil , rich decayed vegetation and gravelly on a hard , moist black loam and stony sub-soil ; 2 nd. rate.

W. 50.92 chs. , rough mountainous land with steep E. and W. slopes from divide. Soil , gravelly , rocky and decayed vegetation on a hard , moist decayed vegetation and rock sub-soil ; 3 rd. rate.

Timber valuable , aspen , spruce , balsam fir and pine on 35.26 chs.

Undergrowth , short mountain grass , buck brush , service willow , sun berry , chaparral and some oak.

Good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 79.90 chs.

N. 0°02 'W. , bet. secs. 15 and 16.

Over rough mountainous land , facing and draining W. ; through dense undergrowth of buck brush , willow and chaparral.

Gradually descend along W. slope of high point.

7.60

Enter dense aspen thicket , bears E. and W

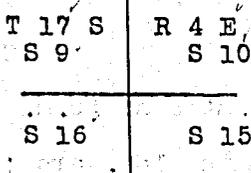
Subdivision of T. 17 S., R. 4 E.

chains	Descend abruptly.						
27.20	Stream, 3 lks. wide, 1 in. deep, good water, course W.						
	Ascend over right bank of stream, thence descend abruptly into fork of Ephraim Canyon.						
39.84	Base of descent, 300 ft. below sec. cor., bears SW. and NE.						
	Gradually descend.						
40.00	Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked						
	<table border="0"> <tr> <td style="border-right: 1px solid black;">S 16</td> <td>S 15</td> </tr> <tr> <td style="border-right: 1px solid black;">$\frac{1}{4}$</td> <td>$\frac{1}{4}$</td> </tr> <tr> <td colspan="2" style="text-align: center;">1913</td> </tr> </table>	S 16	S 15	$\frac{1}{4}$	$\frac{1}{4}$	1913	
S 16	S 15						
$\frac{1}{4}$	$\frac{1}{4}$						
1913							
	from which						
	A pine, 16 ins. diam., bears N. $31\frac{1}{2}^{\circ}$ E., 54 lks. dist., marked $\frac{1}{4}$ S 15 B T						
	A pine, 12 ins. diam., bears S. $16\frac{1}{2}^{\circ}$ W., 10 lks. dist., marked $\frac{1}{4}$ S 16 B T						
40.50	Ascend over small raise, thence gradually descend to						
41.60	Spring branch, 3 lks. wide, 2 to 4 ins. deep, good water, course SW.						
43.20	Begin gradual ascent.						
49.71	Top of spur, projects SW.						
	Descend through heavy timber.						
58.06	Spring branch, 4 lks. wide, 2 ins. deep, good water, course SW.						
	Ascend.						
65.00	Low spur, projects SW.						
	Descend						
78.67	Base of descent, bears SNE. and SW.						
	Thence over land facing W.						
79.00	Wagon road, bears NE. and SW.						
80.00	Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins.						

Subdivision of T. 17 S., R. 4 E.

chains

in the ground for cor. of secs. 9, 10, 15 and 16, with brass cap marked



1913

from which

An aspen, 14 ins. diam., bears N. 38 $\frac{1}{2}$ ° E., 77 lks. dist., marked T 17 S R 4 E S 10 B T

An aspen, 8 ins. diam., bears S. 71 $\frac{1}{2}$ ° E., 113 lks. dist., marked T 17 S R 4 E S 15 B T

An aspen, 10 ins. diam., bears S. 50 $\frac{1}{2}$ ° W., 146 lks. dist., marked T 17 S R 4 E S 16 B T

An aspen, 20 ins. diam., bears N. 54 $\frac{1}{2}$ ° W., 127 lks. dist., marked T 17 S R 4 E S 9 B T

Land rough and broken mountainous, facing and draining W. to Ephraim Canyon.

Soil, decayed vegetation and gravelly mixed with some rich black loam on a hard moist sub-soil of rich black loam and rocks; 3 rd. rate.

Timber, dense aspen and scattering spruce, balsam fir. and some pine of good commercial value.

Undergrowth, buck brush, willow, chaparral and some service brush.

Good grass for grazing purposes.

Land mountainous heavily timbered and covered with dense undergrowth, 80.00 chs.

September 16; At this sec. cor., I set off 2° 40' N., on the decl. arc; and at 11 h. 55 m. a. m. 1. m. t., observe the sun on the meridian; the resulting lat. is 39° 21'

Subdivision of T. 17 S., R. 4 E.

chains	S. $89^{\circ} 59' E.$, on a random line bet. secs. 10 and 15.
40.00	Set temp. $\frac{1}{4}$ sec. cor. Cease work.
	September 16, 1913.
	September 17: At 8 h. 55 m. a. m. 1. m. t., I set off
	$39^{\circ} 21' N.$, on the lat. arc; $2^{\circ} 20' N.$, on the decl. arc; and determine a meridian with the solar at the temp. $\frac{1}{4}$ sec. cor.
	Thence I continue,
	S. $89^{\circ} 59' E.$,
79.92	Intersect N. and S. line .5 lks. N. of the cor. of secs. 10, 11, 14 and 15.
	Thence
	N. $89^{\circ} 57' W.$, on true line bet. secs. 10 and 15
	Over rough and broken mountainous land draining NW., through dense undergrowth of willow, sunberry, buck brush, some oak, maple and chaparral.
	Descend over western slope of divide of Wasatch mountains towards fork of Ephraim Ganyon.
11.90	Enter dense forest of spruce, balsam fir, pine, aspen and cedar.
15.65	Cross small gulch, drains NW.
22.48	Base of steep descent, 175 ft. below sec. cor., bears N. and S.
	Thence over land sloping nearly N.
25.17	Spring branch, 6 lks. wide, 2 to 4 ins. deep, good water, course NW.
	Gradually ascend.
38.80	Spring branch, 2 lks. wide, 1 in. deep, good water, course N.
	Ascend
39.96	Top of low spur, projects N.
	Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

Subdivision of T.17 S., R.4 E.

chains

S 10^v
‡S 15^v

1913

from which

A pine , 24 ins. diam. , bears S. 83° E. , 23 lks.

dist. , marked ‡ S 15 B T

A pine , 26 ins. diam. , bears N. 28° W. , 91 lks.

dist. , marked ‡ S 10 B T

Descend abruptly.

43.22 Spring branch , 2 lks. wide , 1 in. deep , good water,
50 ft. below ‡ sec. cor. , course N.

Ascend abruptly

47.95 Top of spur , 75 ft. above spring branch , projects N.
Descend gradually over gentle NW. slope.

78.90 Leave dense timber , thence through scattering aspen
timber.

79.54 Wagon road ; bears NE. and SW.

79.92 The cor. of secs. 9 , 10 , 15 and 16.

Land , rough broken mountainous with a general N.
exposure and drain to fork of Ephraim Canyon. , from
high ridge spur from divide of Wasatch mountains.
Soil , light decayed vegetation , gravelly and rocky
on rich black loam and rock sub-soil , very moist ; 3 rd.
rate.

Timber , valuable spruce , balsam fir , pine , aspen and
some scattering cedar. on 68.00 chs.

Undergrowth , buck brush , sun berry , willow , maple ,
oak and chaparral , very dense in places.

Good grass for grazing purposes.

Land mountainous heavily timbered and covered with
dense undergrowth. 79.92 chs.

Subdivision of T. 17 S., R. 4 E.

chains

N. 0° 02' W., bet. secs. 9 and 10.

Over rough mountainous land draining west., through dense forest of aspen and undergrowth of willow and buck brush.

Gradually descend towards branch of Ephraim Creek.

2.60 Branch of Ephraim Creek, in large wash filled with boulders, 10 lks. wide, 3 to 5 ins. deep, good water, course W.

Gradually ascend.

8.52 Leave aspen timber, bears E. and W.

Ascend abruptly over S. face of high mountain ridge through dense undergrowth.

13.05 Enter dense aspen thicket, bears E. and W.

20.62 Leave aspen thicket.

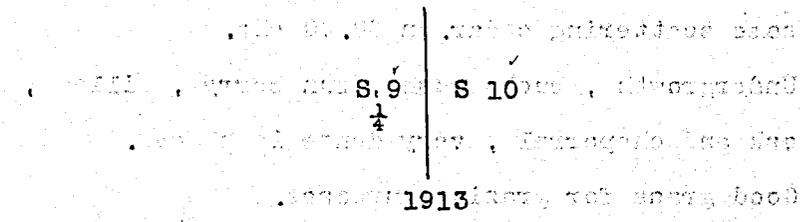
26.25 Top of ridge and high mountain spur, on E. edge of what is commonly called the White Ledge, 800 ft. above creek, bears NE. and SW.

September 17: At this station, I set off 2° 17' N., on the decl. arc; and at 11 h. 55 m. a. m. 1. m. t., observe the sun on the meridian; the resulting lat. is 39° 21'.

Gradually descend over gentle N. and NW. slopes.

37.55 Enter dense aspen thicket, bears E. and W.

40.00 100 ft. below top of ridge. Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked



from which

An aspen, 14 ins. diam., bears S. 89 1/2° E., 18 lks. dist., marked 1/4 S 10 B T

An aspen, 12 ins. diam., bears N. 36° W., 27 lks.

Subdivision of T. 17 S., R. 4 E.

chains

dist., marked $\frac{1}{4}$ S 9 B T

59.72 Leave aspen timber, bears E. and W.

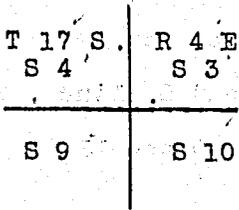
75.00 Ridge, bears NW. and SE.

80.00 In edge of aspen timber

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins.

in the ground for cor. of secs. 3, 4, 9 and 10 with

brass cap marked



1913

from which

An aspen, 7 ins. diam., bears N. $81\frac{1}{2}^{\circ}$ E., 20 lks.

dist., marked T 17 S R 4 E S 3 B T

An aspen, 10 ins. diam., bears S. $30\frac{1}{2}^{\circ}$ E., 62 lks.

dist., marked T 17 S R 4 E S 10 B T

An aspen, 7 ins. diam., bears S. $32\frac{1}{2}^{\circ}$ W., 229 lks.

dist., marked T 17 S R 4 E S 9 B T

An aspen, 12 ins. diam., bears N. $46\frac{1}{2}^{\circ}$ W., 38 lks.

dist., marked T 17 S R 4 E S 4 B T

Land, mountainous with steep N. and S. slopes into canyons and with a general west drainage.

Soil, rich moist black loam and gravel on a hard, moist black loam, gravelly and rocky sub-soil; 2 nd. rate.

Timber, aspen, some pine, spruce and balsam fir, good for commercial purposes.

Undergrowth, sun berry, buck, willow, service, chaparral, oak, maple and some juniper.

Good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth, 80.00 chs.

September 17, 1913

Subdivision of T. 17 S., R. 4 E.

chains

October 15 : At 8 h. 16 m. a. m. l. m. t., I set off
39° 22' N., on the lat. arc ; 8° 26' S., on the decl.
arc ; and determine a meridian with the solar at the
cor. of secs. 3, 4, 9 and 10.

Thence I run
S. 89° 57' E., on a random line bet. secs. 3 and 10

40.00 Set temp. 1/4 sec. cor.

79.95 Intersect N. and S. line, 21 lks. N. of the cor. of
secs. 2, 3, 10 and 11

Thence
N. 89° 48' W., on true line bet. secs. 3 and 10.

Over rough mountainous land, along N. slope of high
mountain ridge, through dense forest of aspen and
scattering spruce and pine timber and dense undergrowth
of buck brush and chaparral.

Descend abruptly over NW. slope.

20.95 Spring branch, 1 lk. wide 1 in. deep, good water,
course NW., 250 ft. below sec. cor.

Ascend abruptly.

24.35 Top of spur, 70 ft. above creek, projects NW. about
10 chs.

Gradually descend through dense pinet timber.

39.97 1/2 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins.
in the ground for 1/4 sec. cor., with brass cap marked

S 3 on

S 10 on

from which
A pine, 14 ins. diam., bears S. 22 1/2° W., 33 lks.
dist., marked 1/4 S 10 B T

A pine, 12 ins. diam., bears N. 27° W., 38 lks.
dist., marked 1/4 S 3 B T

Subdivision of T.17 S., R.4 E

chains

43.00 Leave dense pine timber.

72.45 Bottom of gulch and stream, 2 lks. wide, 1 in. deep, 150 ft. below $\frac{1}{4}$ sec. cor., course N

Ascend abruptly 100 ft. to

79.95 The cor. of secs. 3, 4, 9 and 10

Land rough mountainous, lying on the N. slope of high mountain ridge and draining N. into N. fork of Ephraim canyon.

Soil, rich decayed vegetation and gravelly on a hard, moist sub-soil of rich black loam and rocks, 3 rd. rate.

Timber, chiefly aspen with thick patches of pine, spruce and balsam fir, good for commercial purposes.

Undergrowth, dense, buck, service and chaparral.

Good grass for grazing purposes.

Land, mountainous, heavily timbered, and covered with dense undergrowth 79.95 chs.

October 16 : For solar observation see line bet. secs. 2 and 3

At the cor. of secs. 3, 4, 9 and 10 I set off $8^{\circ} 53'$ S. on the decl. arc; and at 11 h. 46m. a. m. 1. m. t., observe the sun on the meridian; the resulting lat. is $39^{\circ} 22'$.

Thence I run

N. $0^{\circ} 02' W.$, on a random line bet. secs. 3 and 4.

40.00 Set temp $\frac{1}{4}$ sec. cor.

86.65 Intersect N. bdy. of the tp. 17 lks. E. of the cor. of secs. 3, 4, 33 and 34 heretofore described.

Thence

S. $0^{\circ} 09' E.$, on true line bet. secs. 3 and 4.

Over rolling mountainous land draining N., through

Subdivision of T. 17 S., R. 4 E.

chains

scattering forest of aspen and short undergrowth of sage brush

Gradually ascend over rolling mountain top.

15.65 Top of ascent, 70 ft. above sec. cor., bears E. and W. Descend abruptly over S. face of mountain.

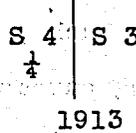
24.65 Leave aspen timber, descend through dense sage brush.

32.65 Leave sage brush, enter dense choke cherry, service, buck brush and chaparral.

34.70 Horse Shoe Irrigation Ditch, 8 lks. wide, bears E. and W. Flows W.

45.00 Enter dense aspen timber, bears E. and W.

46.65 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked



from which

An aspen, 7 ins. diam., bears N. 55° E., 60 lks. dist., marked 1/4 S 3 B T

An aspen, 12 ins. diam., bears S. 74° W., 54 lks. dist., marked 1/4 S 4 B T

46.80 Bottom of gulch, 400 ft. below top of mountain, course W.

Ascend abruptly.

47.80 Top of low ridge, 30 ft. above gulch, bears E. and W. Descend abruptly.

50.65 Spring branch, 5 lks. wide, 3 ins. deep, good water, course S. 80° W.

Thence over broken land in bottom of N. fork of Ephraim Canyon.

53.15 Wagon road, bears E. and W.

54.45 N. fork of Ephraim Creek, 6 lks. wide, 2 ins. deep, good water, course S. 80° W.

Gradually ascend.

Subdivision of T.17 S., R.4 E.

chains

64.05 Stream of clear pure water , 3 lks. wide , 1 in. deep ,
in gulch , 20 ft. deep , course W.
Leave canyon bottom , ascend abruptly over N. slope
through dense aspen timber and scattering pine and spruce

86.65 450 ft. above creek
The cor. of secs. 3 , 4 , 9 and 10
Land rough and rolling mountainous with steep N. and S.
slopes into canyon on S. 71.00 chs. and gentle N. slope on
N. 15.65 chs.

Soil , gravelly and rocky mixed with some decayed
vegetation on a hard , moist sub-soil of rocks and black
loam ; 3'rd. rate.

Timber , dense aspen and bunches of pine and spruce of
good commercial value.

Undergrowth , dense sage , choke cherry , service ,
buck and chaparral.

Some good grass for grazing purposes.

Land mountainous , heavily timbered and covered with
dense undergrowth , 86.65 chs.

October 16 , 1913.

September 11 : Preliminary to the beginning of any
subdivisions in this tp. , I examine the adjustments of
solar transit No. 8538 , (For full description of
instrument see book "B" of this survey) and correct
the level and collimation errors, then , to test the
solar apparatus by comparing its indications result-
ing from solar observations made during P.M. and A. M.
hours with a meridian determined by observations on
Polaris , I proceed as follows :

At the camp near the $\frac{1}{4}$ sec. cor. bet. secs. 22 and 23

Subdivision of T. 17 S., R. 4 E.

chains

a meridian was established by observations made on Polaris September 5.

I place my instrument on this meridian and set off 39° 19' N., on the lat. arc ; 4° 32' N., on the decl. arc ; and at 4 h. 27 m. p. m. l. m. t., determine with the solar a meridian. This meridian coincides with the Polaris meridian of September 5.

September 11, 1913.

September 12 : At 7 h. 57 m. a. m. l. m. t., I set off 39° 19' N., on the lat. arc ; 4° 16' N., on the decl. arc ; and determine a meridian with the solar. This meridian coincides with the Polaris meridian of September 5 . I therefore conclude that the instrument is in perfect adjustment.

From the cor. of secs. 4 , 5 , 32 and 33 on the S. bdy. of the tp. heretofore described

I run

N. 0° 03' W., bet. secs. 32 and 33.

Over nearly level top of divide between Manti and Willow canyons.

Gradually descend over open rolling mountain top.

2.50 Begin steep descent into canyon over land facing N., through dense undergrowth of chaparral.

14.10 Enter dense forest of spruce , pine and balsam fir , bears E. and W.

17.94 Spring branch , 3 lks. wide , 2 ins. deep , good water, course NW.

gradually ascend.

24.56 Leave timber , bears NE. and W.

Subdivision of T. 17S., R. 4 E.

chains

29.00 Top of low spur , projects NW.
Descend.

29.50 Enter scattering timber , bears E. and W.

40.00 200 ft. below top of ridge.

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked

S 32 / S 33

1913

from which

A pine , 22 ins. diam. , bears N. 55° E. , 17 lks.
dist. , marked $\frac{1}{4}$ S 33 B T

A pine , 12 ins. diam. , bears S. 80° W. , 22 lks.
dist. , marked $\frac{1}{4}$ S 32 B T

44.72 Base of descent , 50 ft. below $\frac{1}{4}$ sec. cor. , bears E.
and W.

Thence over rolling land in bottom of canyon.

48.52 Willow Creek , 5 lks. wide , 3 ins. deep , good water,
course SW.

Gradually ascend.

49.72 Leave scattering timber , bears E. and W.

Ascend abruptly over S. slope of ridge through dense
undergrowth of choke cherry and sunberry brush.

59.85 Enter scattering forest of spruce , balsam fir and
pine , bears E. and W.

76.35 Top of high point of spur , 300 ft. above creek ,
projects SW.

Gradually descend 50 ft. to

80.00 Set an iron post , 3 ft. long , 2 ins. in dia. , 12 ins.
in the ground and 12 ins. in a mound of earth and stone,
4 ft. base , 1 ft. high , for cor. of secs. 28 , 29 ,
32 and 33 , with brass cap marked

chains.

T 17 S	R 4 E
S 29	S 28
S 32	S 33

1913

from which

A pine , 12 ins. diam. , bears N. $73\frac{1}{4}^{\circ}$ E. , 131 lks.

dist. , marked T 17 S R 4 E S 28 B T

A pine , 16 ins. diam. , bears S. $49\frac{1}{2}^{\circ}$ E. , 105 lks.

dist. , marked T 17 S R 4 E S 33 B T

A pine , 14 ins. diam. , bears S. $72\frac{1}{2}^{\circ}$ W. , 27 lks.

dist. , marked T 17 S R 4 E S 32 B T

A pine , 10 ins. diam. , bears N. $13\frac{1}{2}^{\circ}$ W. , 63 lks.

dist. , marked T 17 S R 4 E S 29 B T

Note ; On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Land , rough mountainous , with steep N. and S. slopes into canyons.

Soil , generally a rich black loam mixed with gravel and rocks on a hard , moist sub-soil of black loam and rocks ; 3 rd. rate.

Timber , spruce , pine balsam fir and some aspen in patches throughout the mile.

Undergrowth , chaparral , willow , choke cherry and sunberry , very thick in places.

Good grass for grazing purposes.

Land , mountainous , heavily timbered and covered with dense undergrowth 80.00 chs.

September 12 : At this sec. cor. , I set off $4^{\circ} 12'$ N. , on the decl. arc ; and at 11 h. 57 m. a. m. 1. m. t. , observe the sun on the meridian , the resulting lat is $39^{\circ} 18'$

Subdivision of T. 17 S., R. 4 E.

chains.

S. 89°58'E., on a random line bet. secs. 28 and 33

40.00 Set temp. 1/4 sec. cor.

80.02 Intersect N. and S. line 5 lks. S. of the cor. of secs. 27, 28, 33 and 34.

Thence

West, on true line bet. secs. 28 and 33

Gradually ascend over series of rolling benches draining NE., through scattering undergrowth of short mountain grass.

5.10 Enter scattering spruce, balsam fir, pine and aspen timber, bears N. and S.

20.90 Leave timber, bears N. and S.

35.00 Top of high mountain ridge and divide between Ephraim Creek and Willow Creek, 150 ft. above sec. cor., bears NE. and SW.

Descend over broken ground with a general N. and NW. exposure, through undergrowth of willow, buck brush and chaparral.

36.10 Enter scattering timber, bears N. and S.

40.01 On N. slope of ridge.

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 28

1/4

S 33

1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor..

No available bearing trees within limits.

48.05 Spring, branch, 3 lks. wide, 2 ins. deep, good water, course NW.

Ascend over slight raise, then descend.

51.45 Spring branch, 5 lks. wide, 2 ins. deep, good water, course NW.

Subdivision of T. 17 S., R. 4 E.

chains

Thence over rolling N. side of hill.

54.75 Leave timber, bears N. and S.

69.45 Enter timber, bears N. and S.

72.75 Spring branch, 2 lks. wide, 1 in. deep, good water, course N.

Gradually ascend.

80.02 The cor. of secs. 28, 29, 32 and 33.

Land, mountainous with an easterly exposure from high divide between Ephraim and Willow creeks on E. 36.00 chs., and a general N. exposure on W. 44.02 chs.

Soil, generally gravelly and rocky and mixed with some rich black loam which supports an abundant growth of rich mountain grasses, on a hard, moist sub-soil, of black loam and rocks; 3 rd. rate.

Timber, spruce, balsam fir, pine and some aspen of good commercial value.

Undergrowth, buck brush, willow, chaparral and short mountain grass.

Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with dense undergrowth 80.02 chs.

September 12, 1913

September 13 : At 7 h. 56 m. a. m. 1. m. t., I set off
 39° 18' N. on the lat. arc; 3° 53' N., on the decl.
 arc; and determine a meridian with the solar at the
 cor. of secs. 28, 29, 32 and 33

Thence I run
 N. 0° 03' W., bet. secs. 28 and 29.

Over rough mountainous land facing N., through forest
 of spruce, balsam fir, pine and some aspen and under-
 growth of buck brush and chaparral

Subdivision of T. 17 S., R. 4 E

chains.

Descend abruptly into Willow Creek .

19.15 Base of steep descent 200 ft. below sec. cor., bears E. and W.

19.35 Willow Creek , 12 lks. wide , 2 to 4 ins. deep , good water , course SW.

20.30 Leave timber , ascend abruptly over S. face of mountain through dense undergrowth of buck brush.

24.87 Enter aspen thicket , bears E. and W.

27.35 Leave aspen thicket , bears E. and W.

Thence over rocky S. slope of mountain.

40.00 500 ft. above creek.

Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base , 1 ft. high , for $\frac{1}{4}$ sec. cor., with brass cap marked

S 29 S 28

$\frac{1}{4}$

1913

raise a mound of stone . 2 ft. base , 1 $\frac{1}{2}$ ft. high , W. of cor..

Note: On account of natural obstacles , I am unable to set post more than 12 ins. in the ground.

Continueto ascend

42.68 Top of high spur of Hay Stack Mountain , bears NE. and SW.

Descend abruptly through dense undergrowth of chaparral.

54.82 Enter dense aspen timber , bears E. and W.

64.74 Stream , 4 lks. wide , 2 ins. deep , good water , course W. , 200 ft. below top of ridge.

Leave aspen timber.

Ascend.

70.00 Top of Hay Stack Mountain , 100 ft. above stream, bears E. and W. Enter scattering spruce and balsam fir timber.

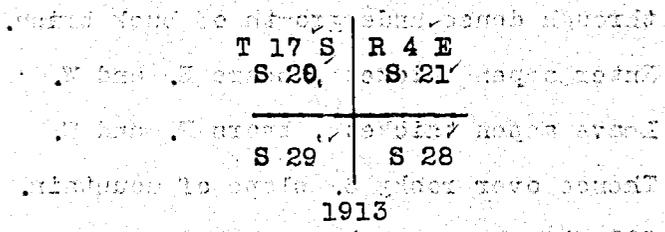
71.15 Descend abruptly over precipitous N. face of mountain over series of limestone ledges.

Subdivision of T. 17 S., R. 4 E.

chains

80.00

On precipitous N. slope of mountain amongst ledges ,
 450. ft. below top of mountain.
 Set an iron post , 3 ft. long , 2 ins. in dia., 24 ins.
 in a mound of stone and earth , 4 ft. base, 2 ft.
 high , for. cor. of secs. 20 , 21 , 28 and 29 , with
 brass cap marked



from which

A pine , 8 ins. diam. , bears N. 74½° E. , 25 lks.
 dist. , marked T 17 S R 4 E S 21 B T

A pine , 8 ins. diam. , bears S. 51¼° E. , 53 lks.
 dist. , marked T 17 S R 4 E S 28 B T

A pine , 5¼ ins. diam. , bears S. 24° W. , 40 lks.
 dist. , marked T 17 S R 4 E S 29 B T

A pine , 12 ins. diam. , bears N. 47° W. , 101 lks.
 dist. , marked T 17 S R 4 E S 20 B T

Note : On account of natural obstacles I am unable to
 set post in the ground.

Land , rough and broken mountainous land with steep N.
 and S. slopes into canyons and with a general drainage
 to the west. N. 10.00 chs. precipitous N. slope of
 mountain and consisting of broken limestone ledges.

Remainder of mile consists of ordinary rough mountain-
 country with N. and S. slopes into Willow Creek.
 Soil , generally stony and rocky with just enough rich
 black loam soil in the crevices of the rocks to support
 an abundant growth of rich grasses.

Timber , aspen and with scattering bunches of pine , spruce
 and balsam fir, of good commercial value.

Undergrowth , buck brush and chaparral.

Good grass for grazing purposes.

Land , mountainous , heavily timbered and covered with

Subdivision of T. 17 S., R. 4 E.

chains

dense undergrowth 80.00 chs.

East, on a random line bet. secs. 21 and 28

40.00 Set temp. $\frac{1}{4}$ sec. cor.

September 13: The sky is overcast at noon, observations for lat. are impossible;

At 1 p.m.; heavy rain prevents field work for the remainder of the day.

September 13, 1913.

September 18: At 7 h. 54 m. a. m. l. m. t., I set off $39^{\circ} 19' N.$, on the lat. arc; $1^{\circ} 59' N.$, on the decl. arc; and determine a meridian with the solar at the temp. $\frac{1}{4}$ sec. cor..

Thence I run

East

80.04 Intersect N. and S. line, 5 lks. S. of the cor. of secs. 21; 22, 27 and 28

Thence

S. $89^{\circ} 58' W.$, on true line, bet. secs. 21 and 28

Over rough mountainous land in Ephraim Canyon, through scattering forest of aspen and undergrowth of chaparral. Descend over rocky ground into creek.

0.36 Telephone line, controlled by the U.S. Forest Service, bears NW. and SE.

4.70 Spring branch; 2 lks. wide, 2 ins. deep, good water, course SW.

9.00 County road, from Ephraim Utah to Emery County, bears N. and S.

9.60 Ephraim Creek in canyon, 15 lks. wide, 3 to 6 ins. deep, good water, in rocky channel of stream, course NW.

Gradually ascend over S. side of Ephraim Canyon.

10.00 Same road, bears NW. and SE.

10.50 Enter dense aspen and some scattering spruce and balsam

Subdivision of T. 17 S., R. 4 E

chains

fir timber , bears N. and S.

27.65 Stream , 4 lks. wide , 2 to 4 ins. deep , good water ,
course N.

40.02 Ascend abruptly.
200 ft. above Ephraim Creek
Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins.
in the ground and 12 ins. in a mound of stone and earth
4 ft. base , 1 ft. high for 1/4 sec. cor. , with brass cap
marked

S 21
1/4

S 28

1913-

from which

An aspen , 8 ins. diam. , bears N. 3° E. , 21 lks.
dist. , marked 1/4 S 21 B T

An aspen , 7 ins. diam. , bears S. 43° E. , 7 lks.
dist. , marked 1/4 S 28 B T

Note : On account of natural obstacles I am unable to set
post more than 12 ins. in the ground.

52.00 Top of spur from Hay Stack Mountain , 300 ft. above 1/4
sec. cor. , projects N.

Descend along precipitous N. face of Hay Stack Mountain
across series of limestone ledges and dense timber.

62.40 Bottom of gulch and creek , 5 lks. wide , 2 ins. deep ,
good water , course NW.

Ascend abruptly.

66.20 Spur , 100 ft. above creek , projects N.

Descend abruptly

70.20 Deep gulch , drains NW.

Ascend abruptly.

73.80 Spur , 75 ft. above gulch , projects N.

Descend.

80.04 The cor. of secs. 20 , 21 , 28 and 29.

chains

Land , rough and broken mountainous with a general N. exposure. W. 28.04 chs., precipitous N. slope of Hay Stack Mountain , consisting of masses of broken lime - stone ledges cut by numerous deep gulches.

Soil , E. 52 chs., generally gravelly and rocky mixed with some decayed vegetation and black loam of good quality , on a hard , moist decayed vegetation and rocky sub-soil ; 3 rd. rate. W. 28.04 chs., soil is generally rocks , with just enough rich dirt in the crevices of the rocks to support an abundant growth of rich grasses. Timber , aspen and scattering spruce and fir of good commercial value.

Undergrowth , chaparral and some buck and willow brush. Good grass for grazing purposes.

Land mountainous-, heavily timbered and covered with dense undergrowth 80.04 chs.

September 18 : At this sec. cor., I set off $1^{\circ} 55' N.$, on the decl. arc ; and at 11 h. 54 m. a. m. l. m. t., observe the sun on the meridian , the resulting lat. is $39^{\circ} 19'$.

$N. 0^{\circ} 03' W.$, bet, secs. 20 and 21.

Descend abruptly over precipitous N. face of Hay Stack Mountain , over series of limestone ledges and scattering forest of spruce and balsam fir.

9.00 Bottom of Hay Stack Mountain , 350 ft. below sec. cor., bears NW. and SE.

Leave timber , enter dense willow undergrowth.

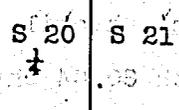
Gradually descend over gentle N. slope towards Ephraim Canyon.

16.92 Spring branch , 5 lks. wide , 2 ins. deep , good water, course W.

17.80 Spring branch , 3 lks. wide , 1 in. deep , good water,

Subdivision of T. 17 S., R. 4 E.

- chains.
- course NW.
- 21.50 Leave dense willow undergrowth; enter scattering aspen timber, bears NW. and SE.
- 22.09 Spring branch, 3 lks. wide, 2 ins. deep, good water, course NW.
- 27.00 Enter dense aspen timber, bears E. and W.
- 28.47 The SW. cor. of a house at the U. S. Experiment Station. Another house bears N. 30° W., 50 lks. dist.. Barn, bears S. 70° E., 4.00 chs. dist..
- 34.74 Log fence, bears NW. and SE. Descend more rapidly.
- 40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked



1913

- from which
- An aspen, 12 ins. diam., bears S. 45 $\frac{1}{2}$ ° E., 21 lks. dist., marked $\frac{1}{4}$ S 21 B T
- An aspen, 14 ins. diam., bears N. 61° W., 24 lks. dist., marked $\frac{1}{4}$ S 20 B T

September 18, 1913

Geo. C. Catharine

U. S. Transitman

September 20: At 7 h. 54 m. a. m. l. m. t., I set off 39° 19' N., on the lat. arc; 1° 11' N., on the decl. arc; and determine a meridian with the solar at the $\frac{1}{4}$ sec. cor., bet. secs. 20 and 21

Thence I run N. 0° 03' W.

Over mountainous land facing N., through dense forest

Subdivision of T.17 S., R. 4 E.

chains.

of aspen and some scattering balsam fir and spruce ,
and undergrowth of chaparral and some service brush.

Descend towards Ephraim Canyon.

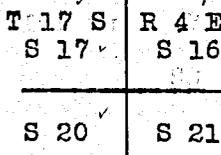
57.23 Telephone line controlled by the U. S. Forest Service ,
bears N. 80°W. and S. 80°E.

67.80 County road , from Ephraim , Utah to Emery County ,
bears N. 60°W. and S. 40°E.

70.33 Drag road , bears NW. and SE.

75.92 W. of line 2 chs. , is a swamp, which contains about 2
acres of land.

80.00 Set an iron post , 3 ft. long, 2 ins. in dia., 2 1/2 ins.
in the ground for cor. of secs. 16 , 17 , 20 and 21 ,
with brass cap marked



1913

from which

An spruce , 8 ins. diam., bears N. 46 1/2° E., 60 lks.

dist., marked T 17 S R. 4 E S 16 B T

An spruce , 7 ins. diam., bears S. 60° E., 46 lks.

dist., marked T 17 S R. 4 E S 21 B T

An aspen , 7 ins. diam., bears S. 57 1/2° W., 32 lks.

dist., marked T 17 S R 4 E S 20 B T

An aspen , 5 ins. diam., bears N. 43° W., 41 lks.

dist., marked T 17 S R 4 E S 17 B T

Land , rough and rolling mountainous land with a general

N. exposure.

S. 9.00 chs. precipitous N. slope of Hay Stack Mountain.

consisting of series of broken limestone ledges. Soil,

rocks with enough dirt in the crevices to support an

abundant growth of rich grasses.

N. 71.00 chs., rolling mountainous land with gentle N.

slope into Ephraim Canyon. Soil , generally gravelly

Subdivision of T.17 S., R. 4 E.

chains

and mixed with a rich black loam, on a hard, moist sub-soil of rich loam and gravel; 2nd. rate.

Timber, dense aspen, with some scattering spruce and balsam fir, of good commercial value.

Undergrowth, dense willow, chaparral and service brush.

Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with dense undergrowth, 80:00 chs.,

N. 89° 58'E., on a random line bet. secs. 16 and 21

40.00 Set temp. 1/4 sec. cor..

80.30 Intersect N. and S. line 2 1/2 kls. N. of the cor. of secs. 15, 16, 21 and 22

Thence

S. 89° 59'W., on true line bet. secs. 16 and 21

Over rough mountainous land sloping and draining W., through dense undergrowth of buck brush and chaparral.

Descend over W. face of high mountain point.

11.70 Enter dense forest of aspen, spruce and balsam fir, bears N. and S.

15.30 Stream of clear pure water, 18 kls. wide, 3 to 6 ins. deep, course S.

15.60 Drag road, bears N. and S.

32.05 Base of steep descent, 600 ft. below sec. cor., bears N. and S.

Gradually descend across W. slope of bench through dense aspen timber.

40.15 Set an iron post, 3 ft. long, 1 1/2 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 16

S 21

Subdivision of T. 17 S., R. 4 E.

chains

from which

An aspen, 10 ins. diam., bears N. 10° E., 25 lks.
 dist., marked $\frac{1}{4}$ S 16 B.T.

An aspen, 12 ins. diam., bears S., 24° E., 16 lks.
 dist., marked $\frac{1}{4}$ S 21 BT.

September 20: At this $\frac{1}{4}$ sec. cor., I set off 1° 07' N.,
 on the decl. arc; and at 11 h. 54 m. a. m. l. m. t.,
 observe the sun on the meridian; the resulting lat is
 39° 20'

44.30 Wood road, bears N. 20° E. and S. 20° W.

46.56 Leave dense aspen timber, bears NW. and SE.
 Enter exceptionally dense service and oak brush.

48.30 Leave bench, bears NW. and SE.
 Descend abruptly into Ephraim Canyon.

56.30 Leave dense undergrowth, enter scattering aspen and
 spruce timber, bears NW. and SE.

57.30 Base of steep descent, bears NW. and SE.
 Gradually descend.

58.30 Ephraim Creek, in canyon, 20 lks. wide, 10 to 12 ins.
 deep, good water, 450 ft. below $\frac{1}{4}$ sec. cor., course
 NW.

Ascend abruptly.

62.00 Top of spur, 40 ft. above creek, projects N.
 Descend abruptly.

63.30 Spring branch, 5 lks. wide, 2 ins. deep, good water,
 35 ft. below spur, course N.

Gradually ascend.

66.40 Spring branch, 1 lk. wide, 1 in. deep, good water,
 course N.

Ascend abruptly 40 ft. to

70.05 Top of spur, projects N.
 Enter dense balsam fir and spruce timber, thence over
 land facing nearly N.

80.30 The cor. of secs. 16, 17, 20 and 21,
 Land, rough mountainous, with W. and N. slopes and

Subdivision of T. 17 S., R. 4 E

chains

with a general NW. drainage.

Soil ; decayed vegetation and gravelly on a hard , moist decayed vegetation and rocky sub-soil ; 3 rd. rate.

Timber , aspen, spruce and balsam fir of good commercial value.

Undergrowth , dense chaparral , service , oak and buck brush.

Good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 80.30 chs.

September 20 , 1913.

Note: Continuous storm of rains and snow prevents field work on September 22, 23 and 24.

September 25: Sky overcast and heavy fog prevents field work in A.M.

At 1 h. 52 m. p. m. 1. m. t., I set off 39° 19' N., on the lat. arc ; 0° 51' S. on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 16 , 17 , 20 and 21

Thence I run N. 0° 03' W., bet. secs. 16 and 17.

Over mountainous land , through dense forest of aspen, scattering spruce and balsam fir., and undergrowth of chaparral and willow.

Descend gradually over N. face of mountain towards Ephraim Creek .

- 7.62 Descend abruptly,
- 12.00 Base of steep descent , gradually descend.
- 23.00 Wood road , bears NW. and SE.
- 35.55 Wood road , bears N. 75° W. and S. 15° E.

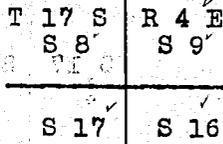
Subdivision of T. 17 S., R. 4 E.

chains

80.00

1000ft. below top of ridge

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 8, 9, 16 and 17, with brass cap marked



1913

from which

A spruce, 6 ins. diam., bears N. 58°E., 54 lks.

dist., marked T 17 S R 4 E S 9 B T

A spruce, 10 ins. diam., bears S. 36½°E., 46 lks.

dist., marked T 17 S R 4 E S 16 B T

A spruce, 12 ins. diam., bears S. 61½°W., 24 lks.

dist., marked T 17 S R 4 E S 17 B T

A spruce, 8 ins. diam., bears N. 70°W., 43 lks.

dist., marked T 17 S R 4 E S 8 B T

Land, rough mountainous with steep N. and S. slopes into canyons and with a general W. drainage.

Soil, generally gravelly and decayed vegetation and mixed with some rich black loam on a hard, moist, decayed vegetation and gravelly sub-soil; 3 rd. rate.

Timber, aspen, spruce, balsam fir and some pine of good commercial value.

Undergrowth, dense chaparral, choke cherry, willow and service brush.

Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with dense undergrowth, 80.00 chs.

September 25, 1913

Subdivision of T. 17 S., R. 4 E.

chains

September 26: At 8 h. 21 m. a. m. l. m. t., I set off
39° 21' N., on the lat. arc ; 1° 08' S., on the decl arc ;
and determine a meridian with the solar at the cor. of
secs. 8, 9, 16 and 17

Thence I run

N. 89° 59' E., on a random line bet. secs. 9 and 16

40.00 Set temp. 1/4 sec. cor.

80.28 Intersect N. and S. line 5 lks. S. of the cor. of secs.
9, 10, 15 and 16

Thence

S. 89° 57' W., on true line bet. secs. 9 and 16.

Over rough mountainous land, facing and draining W.,
through dense forest of aspen and scatteringspruce and
balsam fir and undergrowth of chaparral.

Gradually descend.

13.28 Creek, 5 lks. wide, 3 to 6 ins. deep, good water,
in large wash filled with boulders, course S. 80° W.

Thence over S. slope of mountain ridge.

40.14 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins.
in the ground for 1/4 sec. cor., with brass cap marked

S 9

S 16

1913

from which

A spruce, 8 ins. diam., bears S. 24 1/2° E., 31 lks.
dist., marked 1/4 S 16 B T

A spruce, 10 ins. diam., bears N. 23° W., 43 lks.
dist., marked 1/4 S 9 B T

42.00 Begin steep descent into canyon.

49.35 Base of steep descent, 125 ft. below 1/4 sec. cor., bears
NW. and SE.

Gradually descend.

53.75 Creek in gulch, 5 lks. wide, 4 ins., deep, good

Subdivision of T. 17 S., R. 4 E.

chains.

water, course N. 60°W.
September 26: At this station I set off 1°13'S., on the decl arc; and at 11 h. 54 m. a. m. 11 m. t., observe the sun on the meridian, the resulting lat. is 39° 21'.

Ascend through dense aspen, balsam fir, spruce and pine timber.

61.90 Top of spur, 50 ft. above creek, projects N. 1
Descend.

72.10 Leave aspen timber, bears N. and S.

80.28 75 ft. below spur.
The cor. of secs. 8, 9, 16 and 17.

Land, rough and broken mountainous, with a general W. exposure.

Soil, decayed vegetation, grayelly and rocky on a hard, moist sub soil of rich black loam and rocks, 3 rd. rate.

Timber dense aspen and some scattering spruce and balsam fir on E. 53.75 chs., with dense balsam fir, spruce and pine timber on W. 26.53 chs. This timber is of good commercial value.

Undergrowth, dense chaparral, and service brush.
Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with dense undergrowth 80.28 chs.

N. 0°03'W., bet. secs. 8 and 9,
Over rough mountainous land, through dense forest of spruce, balsam fir, pine and aspen and undergrowth of chaparral, choke cherry, sevice and some oak brush.

Descend abruptly over N. slope of ridge.
7.75 Bottom of canyon and creek, 5 lks. wide 4 ins. deep, good water, 200 ft. below sec. cor., course W.

Subdivision of T. 17 S., R. 4 E.

chains

Ascend abruptly over S. face of high ridge.

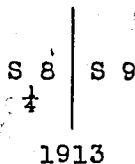
10.00 Leave timber, enter exceptionally dense undergrowth of oak, service, choke cherry and buck brush.

26.85 Top of ascent and S. side of ridge, 300 ft. above creek, bears E. and W.

Leave dense undergrowth, enter dense forest of aspen and scattering spruce.

Thence over nearly level land on top of ridge.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked



from which

An aspen, 6 ins. diam., bears S. $80\frac{1}{2}^{\circ}$ E., 19 lks. dist., marked $\frac{1}{4}$ S 9 B T

An aspen, 6 ins. diam., bears S. $60\frac{1}{2}^{\circ}$ W., 20 lks. dist., marked $\frac{1}{4}$ S 8 B T

41.90 Old wagon road, bears E. and W.

44.00 Begin gradual descent, enter dense undergrowth of choke cherry and service brush.

55.50 Hollow, 50 ft. below $\frac{1}{4}$ sec. cor., drains NW.

Leave dense undergrowth, bears NW. and SE.

Gradually ascend

60.00 Cease work.

September 26, 1913

Howard Miller

U. S. Surveyor.

October 1: At 8h. 50m. a. m. 1. m. t., I set off $39^{\circ} 21' N.$, on the lat. arc; $3^{\circ} 06' S.$, on the decl. arc; and determine a meridian with the solar at this station. Thence I run

Subdivision of T. 17 S. R. 4 E.

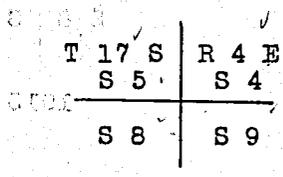
chains

N. 0° 03' W. Continue to ascend.

70.00 Top of high ridge spur, bears NW. and SE. 100 ft. above Descend abruptly into N. fork of Ephraim Canyon.

71.50 Leave aspen timber, enter spruce, balsam fir and pine and dense undergrowth of choke cherry, service and buck brush.

80.00 100 ft. below spur. Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 4, 5, 8 and 9, with brass cap marked



1913

from which

A pine, 10 ins. diam., bears N. 62 1/2° E., 51 lks. dist., marked T 17 S R 4 E S 4 B T

A fir, 16 ins. diam., bears S. 89 1/2° E., 97 lks. dist., marked T 17 S R 4 E S 9 B T

A spruce, 20 ins. diam., bears S. 89° W., 54 lks. dist., marked T 17 S R 4 E S 8 B T

A spruce, 10 ins. diam., bears N. 20 1/4° W., 62 lks. dist., marked T 17 S R 4 E S 5 B T

Land rough mountainous, with steep N. and S. slopes into canyons draining W.

Soil, decayed vegetation, gravelly and some rocky on a hard, moist sub-soil of rich black loam and rocks; 3 rd. rate.

Timber, aspen, spruce, balsam fir and pine of good commercial value.

Undergrowth, choke cherry, service brush, buck brush, oak, some sage and chaparral.

Good grass for grazing purposes.

Subdivision of T. 17 S., R. 4 E.

chains

Land mountainous , heavily timbered and covered with dense undergrowth , 80.00 chs.

October 14 : At 8 h. 46 m. a. m. l. m. t. , I set off $39^{\circ}22'$ N. , on the lat. arc ; $8^{\circ}04'$ S. , on the decl. arc ; and determine a meridian with the solar at the cor. of secs , 4 , 5 , 8 and 9.

Thence I run

N, $89^{\circ}57'$ E. , on a random line bet. secs. 4 and 9

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.13 Intersect N. and S. line $2\frac{1}{2}$ lks. N. of the cor. of secs. 3 , 4 , 9 and 10

Thence

S. $89^{\circ}58'$ W. , on true line bet. secs. 4 and 9

Over rough mountainous land along N. slope of mountain draining N. , into N. Fork of Ephraim Creek , through forest of aspen , pine , spruce and balsam fir , and undergrowth of buck brush , choke cherry and chaparral.

Ascend

3.65 Top of spur , projects NW. about 18 chs.

Descend abruptly.

30.93 Bottom of canyon and creek , 3 lks. wide , 1 in. deep , good water , 350 ft. below top of spur , course N. 30° W.

31.65 Spring branch , 1 lk. wide , 1 in. deep , good water , course N.

Ascend abruptly.

40.06 $\frac{1}{2}$ 230 ft. above creek

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked

S 4

$\frac{1}{4}$

S 9

1913

Subdivision of T. 17 S., R. 4 E.

chains

from which

An aspen , 7 ins. diam., bears S. 26 $\frac{1}{2}$ ° E., 54 lks.dist., marked $\frac{1}{4}$ S 9 B TAn aspen , 7 ins. diam., bears N. 21 $\frac{1}{2}$ ° W., 32 lks.dist., marked $\frac{1}{4}$ S 4 B T.

October 14 : At this $\frac{1}{4}$ sec. cor., I set off 8° 08' S.,
on the decl. arc ; and 11 h. 46 m. a. m. l. m. t.,
observe the sun on the meridian , the resulting lat. is
39° 22'

41.15 Top of spur , 20 ft. above $\frac{1}{4}$ sec cor., projects N.

Descend

48.15 Hollow , 50 ft. deep , course N.

Ascend

53.95 Spur , 50 ft. above hollow , projects N.

Gradually descend along S. side of heavy timber.

80.13 The cor. of secs. 4 , 5 , 8 and 9

Land rough and broken mountainous with a general .N.
exposure.

Soil , rocky and gravelly mixed with some rich black
loam , on a hard , moist sub-soil of black loam and rock
; 3 rd. rate.

Timber , aspen , pine , spruce and balsam fir of good
commercial value.

Undergrowth , buck brush , choke cherry and chaparral.

Some good grass for grazing purposes.

Land mountainous , heavily timbered and covered with
dense undergrowth 80.13 chs.

October 14 , 1913.

October 1 : For solar observation see line bet secs.
8 and 9.

N. 0° 03' W., on a random line bet. secs. 4 and 8

Subdivision of T. 17 S., R. 4 E

chains

20.00 Cease work

October 1, 1913.

October 4 : Storm of rain and snow in a. m. prevents field work.

At 2 p. m., by a back sight along my line bet. secs. 4

5, I continue N. 0° 03' W., on random line bet. secs. 4 and 5

40.00 Set temp. $\frac{1}{4}$ sec. cor.

At 3:30 p. m., storm of hail and snow prevents field work for remainder of this day.

October 4, 1913.

October 9 : The sky is overcast and heavy fog delays work in a. m.

At 1 h. 47 m. p. m. l. m. t., I set off 39° 22' N., on the lat. arc ; 6° 16' S., on the decl. arc ; and

determine a meridian with the solar at the temp. $\frac{1}{4}$ sec. cor.

Thence I continue

N. 0° 03' W.

86.65 Intersect N. bdy of the tp. 12 lks. W. of the cor. of secs. 4, 5, 32 and 33 heretofore described.

Thence

S. 0° 02' W., on true line bet. secs. 4 and 5

Over rough mountainous land with a general NW. exposure,

through scattering aspen timber and dense undergrowth of choke cherry and service brush.

Gradually ascend.

12.75 Top of spur, 50 ft. above sec. cor., projects NW.

Descend 60 ft. to

17.65 Hollow, drains W.

Ascend.

21.85 Enter dense aspen timber, bears E. and W.

36.65 Leave aspen timber, bears E. and W.

Ascend abruptly.

Subdivision of T. 17 S., R. 4 E

chains

42.25 Top of ridge , 150 ft. above hollow , bears NE. and SW.

Descend abruptly over S. face of ridge.

46.65 Set an iron post , 3 ft. long , 1 in. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth 4 ft. base , 1 ft. high , for 1/4 sec. cor. , with brass cap marked

S 5 S 4
= 1/4

1913

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , W. of cor.

Note: On account of natural obstacles , I am unable to set post more than 12 ins. in the ground.

54.15 Enter dense mahogany undergrowth , bears E. and W

56.05 Leave mahogany.

60.23 Horse shoe irrigation ditch , bears E. and W. Flows W.

63.75 Base of descent and bottom of N. fork of Ephraim Canyon, 300 ft. below 1/4 sec. cor. , bears NE. and SW

Thence across canyon bottom

64.15 Enter dense balsam fir , pine and spruce timber , bears NE. and SW.

64.75 Canyon road , bears NE. and SW.

66.05 N. fork of Ephraim Creek , 20 lks. wide , 10 to 12 ins. deep , good water , course W.

Leave canyon ascend abruptly over steep N. slope , through exceptinally dense , spruce , balsam fir and pine timber.

86.65 350 ft. above creek.

The cor. of secs. 4 , 5 , 8 and 9.

Land , rough mountainous , with steep N. and S. slopes into canyons and with a general W. drainage.

Soil , gravelly , rocky and decayed vegetation on a hard , moist sub-soil of decayed vegetation and rocks ;

Subdivision of T.17 S., R.4 E.

chains

3 rd. rate.

Timber , aspen , spruce ; balsam fir and pine of good commercial value.

Undergrowth , choke cherry , service , chaparral , willow , and mahogany.

Some good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth , 86.65 chs.

October 9 , 1913

H. P. Rathbone

U. S. Transitman.

September 17: For solar observation see line bet. secs. 31 and 36 , page 122 of this book. Res. of W. bdy. From the cor. of secs. 5 , 6 , 31 and 32 on the S. bdy. of the tp. , heretofore described.

I run

N. 0° 03' W. , bet. secs. 31 and 32.

Over rough mountainous land having a general W. exposure , through dense forest of spruce and balsam fir and undergrowth of chaparral.

Ascend abruptly 50 ft. to

2.00 Top of spur , projects W.

Descend abruptly over series of ledges bearing N. 20° E. and S. 20° W.

19.00 Base of ledges and high breaks of mountain , 300 ft. below spur , bears N. 20° E. and S. 20° W.

Enter exceptionally dense undergrowth of willows and fallen aspen timber , caused by snow slide.

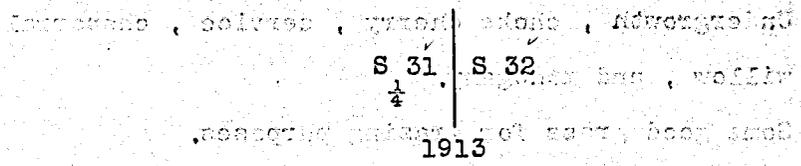
36.80 Leave willow undergrowth and fallen aspen timber , bears E. and W.

Subdivision of T. 17 S., R. 4 E.

chains.

Thence through aspen timber and undergrowth of chaparral.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked



from which

An aspen, 10 ins. diam., bears S. 21° E., 35 lks. dist., marked 1/4 S 32 B T

An aspen, 10 ins. diam., bears S. 68 1/4° W., 41 lks. dist., marked 1/4 S 31 B T

54.00 Spring branch in small ravine, 3 lks. wide, 1 in. deep, good water, course NW.

Leave timber, enter opening, bears NW. and SE.

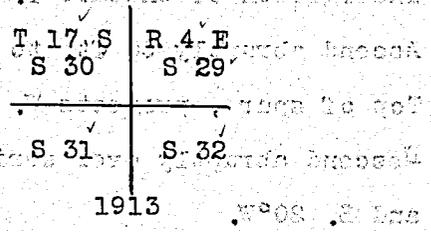
61.50 Leave opening, enter dense aspen timber, bears NW. and SE.

67.00 Leave timber, enter opening, bears E. and W.

76.00 Leave opening, enter dense aspen timber, bears NE. and SW.

Gradually descend.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 29, 30, 31 and 32 with brass cap marked



from which

An aspen, 10 ins. diam., bears N. 57 1/2° E., 22 lks. dist., marked T. 17 S R. 4 E S. 29 B. T

An aspen, 6 ins. diam., bears S. 56 1/2° E., 13 lks. dist., marked T. 17 S R. 4 E S. 32 B. T

An aspen, 7 ins. diam., bears S. 52° W., 28 lks.

Subdivision of T. 17 S., R. 4 E.

chains

dist., marked T 17 S R 4 E S 31 B T

An aspen, 8 ins. diam., bears N. $57\frac{3}{4}^{\circ}$ W., 34 lks.

dist., marked T 17 S R 4 E S 30 B T

Land, rolling bench land and rough mountainous, with a general W. exposure. S. 19 chs. rough broken mountains N. 61.00 chs., rolling bench land at the base of high breaks of mountain.

Soil, generally rocky, stony and gravelly mixed with some rich black loam on a hard, moist sub-soil of gravel and decayed vegetation; 3 rd. rate.

Timber, aspen with some scattering spruce and balsam fir of good commercial value.

Undergrowth, chaparral, willow and some svice brush.

Some good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

September 17, 1913.

September 18: At 7 h. 54 m. a. m. l. m. t., I set off $39^{\circ} 18' N.$, on the lat. arc; $1^{\circ} 59' N.$, on the decl. arc; and determine a meridian with the solar at the cor. of secs. 29, 30, 31 and 32

Thence I run S. $89^{\circ} 58' E.$, on a random line bet. secs. 29 and 32

40.00 Set temp. $\frac{1}{4}$ sec. cor.
79.90 Intersect N. and S. line 5 lks. S. of the cor. of secs. 28, 29, 32 and 33

Thence West, on true line bet. secs. 29 and 32

Over rough mountainous land draining W., through scattering forest of spruce, balsam fir and pine. Descend abruptly over W. face of spur which divides forks of Willow Creek.

Subdivision of T. 17 S., R. 4 E.

- chains
- 3.00 Enter dense undergrowth of choke cherry and chaparral , bears NE. and S.
 - 18.00 Enter dense aspen thicket , bears N. and S.
 - 28.70 Bottom of canyon and fork of Willow Creek , 5 lks. wide 2 ins. deep , good water , 350 ft. below sec. cor. , course NW.
Ascend abruptly over NE. slope.
 - 37.30 Top of steep ascent , 100 ft. above creek , bears N. and S.
Gradually ascend over land facing almost N.
 - 39.95 Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked
 $\frac{1}{4}$ S 29
 $\frac{1}{4}$
 $\frac{1}{4}$ S 32
 1913
 from which
 An aspen , 10 ins. diam. , bears S. $58\frac{1}{2}^{\circ}$ W. , 42 lks. dist. , marked $\frac{1}{4}$ S 32 B T
 An aspen , 12 ins. diam. , bears N. $13\frac{1}{4}^{\circ}$ W. , 36 lks. dist. , marked $\frac{1}{4}$ S 29 B T
 - 51.90 Top of spur , projects N.
Descend abruptly over W. slope.
 - 57.10 Hollow , 150 ft. below spur , projects NW.
Ascend.
 - 60.30 Spur , 60 ft. above hollow , projects N.
Descend.
 - 68.30 Spring branch , in head of small hollow , 1 lk. wide , 1 in. deep , good water , 75 ft. below spur , course N.
Ascend 30 ft. to
 - 75.00 Top of flat spur , projects N.
Descend.
 - 79.90 The cor. of Secs. 29 , 30 , 31 and 32.
Land rough and broken mountainous with a general N.

Subdivision of T. 17 S., R. 4 E

chains

exposure and with a westerly drain.

Soil , rocky , gravelly and decayed vegetation on a hard, moist sub-soil of decayed vegetation and rocks.,

3 rd. rate.

Timber , dense aspen , spruce , balsam fir and pine , of good commercial value.

Undergrowth , choke cherry , service brush and some chaparral.

Some good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 79.90 chd.

Having retraced the W. bdy. of this tp., and finding it to be out of limits in distance , and that closing corners will be necessary upon it., I therefore run N. 89°58'W. , on true line bet. secs. 30 and 31

Over rough mountainous land with a general W. exposure , through dense forest of aspen and scattering spruce and pine and undergrowth of chaparral.

Gradually descend.

2.55 Descend abruptly.

17.45 Base of steep descent , 175 ft. below sec. cor., bears N. and S.

Thence over nearly level bench.

20.85 Leave bench , bears N. and S.

Descend abruptly over W. slope.

21.55 Spring branch , 2 lks. wide , 1 in. deep , good water , course S. 80°W.

23.90 Same stream , course N. 80°W.

30.38 Enter exceptionally heavy undergrowth of willow , bears N. and S.

32.60 Leave willow undergrowth , bears N. and S.

37.45 Base of steep descent , 250 ft. below bench , bears N.

Subdivision of T.17S., R.4 E.

chains

and S.

Gradually descend.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S 30

S 31

1913

from which

An aspen, 8 ins. diam., bears S.1°E., 12 lks. dist., marked $\frac{1}{4}$ S 31 B T

An aspen, 10 ins. diam., bears N.43°W., 34 lks. dist., marked $\frac{1}{4}$ S 30 B T

41.20 Spring branch in hollow, 4 lks. wide, 2 ins. deep, good water, course N.

Gradually ascend.

53.20 Spur, 40 ft. above hollow, projects NW.

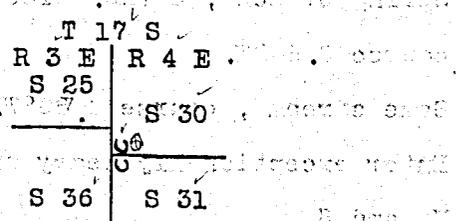
Leave aspen timber, bears N. and S. Enter dense sage brush.

65.05 Old road, bears N. and S.

71.60 Leave sage brush, enter dense aspen timber, bears N. and S.

78.45 Intersect W. bdy. of the tp. 1.45 chs., S.0°10'E., of the cor. of secs. 25 and 36 heretofore described.

At intersection, Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for closing cor. of secs. 30 and 31, with brass cap marked



1913

from which

Subdivision of T.17 S., R. 4 E.

chains

An aspen , 4 ins. diam. , bears N. 58 3/4 ° E. , 43 lks.
dist. , marked CC T 17 S R 4 E S 30 B T

An aspen , 6 ins. diam. , bears S. 61 3/4 ° E. , 80 lks.
dist. , marked CC T 17 S R 4 E S 31 B T

Land , mountainous , with a general W. exposure.
Soil , decayed vegetation and gravelly , on a hard ,
moist sub-soil of black loam and rocks ; 3 rd. rate.
Timber , dense aspen , with some scattering patches of
spruce , balsam fir and pine , of good commercial
value.

Undergrowth , dense chaparral , willow and some sage
brush.

Good grass for grazing purposes.

Land mountainous , heavily timbered and covered with
dense undergrowth 78.45 chs.

September 18 : at this closing cor. , I set off 1 ° 55 ' N. ,
on the decl. arc ; and at 11 h. 54 m. a. m. l. m. t. ,
observe the sun on the meridian , the resulting lat. is
39 ° 18 ' .

N. 0 ° 03 ' W. , bet. secs. 29 and 30

Over rough mountainous land draining W. , through dense
forest of aspen and some scattering patches of spruce
balsam fir and pine timber and undergrowth of chaparral
and willow.

18.18 Descend abruptly. brs. E. and W.

21.00 Wash , in ravine , 20 lks. wide , 10 ft. deep , course
NW.

22.60 Willow creek , 20 lks. wide 6 to 8 ins. deep , good
water , course N. 60 ° W. , 125 ft. below sec. cor.
Gradually ascend.

27.82 Top of spur , 50 ft. above creek , projects W.

Descend abruptly through dense undergrowth of service

Subdivision of T. 17 S., R. 4 E.

chains	brush.				
30.00	Spring branch, in hollow, 50 ft. below top of spur, 5 lks. wide, 4 ins. deep, good water, course W, Gradually ascend				
39.00	Spur, 80 ft. above hollow, projects W, Descend.				
40.00	Set an iron post, 3 ft. long, 1 in. in dia., 2 1/4 ins. in the ground for 1/4 sec. cor., with brass cap marked				
	<table border="1"> <tr> <td>S 30</td> <td>S 29</td> </tr> <tr> <td>1/4</td> <td></td> </tr> </table>	S 30	S 29	1/4	
S 30	S 29				
1/4					
	from which				
	An aspen, 6 ins. diam., bears S. 79 1/2° E., 31 lks.				
	An aspen, 6 ins. diam., bears N. 76 3/4° W., 27 lks.				
	September 18, 1913.				
	<i>Howard W. Miller</i>				
	U. S. Surveyor.				
	September 20: At 8 h. 54 m. a. m. 1. m. t., I set off				
	39° 19' N., on the lat. arc; 1° 10' N., on the decl. arc;				
	and determine a meridian with the solar at the 1/4 sec.				
	cor. bet. secs. 29 and 30				
	Thence I run				
	N. 0° 03' W.				
42.39	Enter dense undergrowth of choke cherry and willow, bears E. and W.				
48.25	Spring branch, 2 lks. wide, 1 in. deep, good water, course W.				
48.65	Spring branch, 2 lks. wide, 2 ins. deep, good water, course W.				
49.44	Spring branch, 2 lks. wide, 2 ins. deep, good water, course W.				
	Ascend abruptly.				
58.21	Top of spur, 200 ft. above base, projects W.				

Subdivision of T.17S., R.4 E.

chains

Descend gradually.

80.00

Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins. in the ground for cor. of secs. 19 , 20 , 29 and 30 , with brass cap marked

T 17 S	R 4 E
S 19	S 20
S 30	S 29

1913

from which

An aspen , 6 ins. diam. , bears N. $64\frac{1}{2}^{\circ}$ E. , 33 lks. dist. , marked T 17 S R 4 E S 20 B T

An aspen ; 8 ins. diam. , bears S. $50\frac{1}{2}^{\circ}$ E. , 25 lks. dist. , marked T 17 S R 4 E S 29 B T

An aspen , 8 ins. diam. , bears S. $41\frac{1}{2}^{\circ}$ W. , 38 lks. dist. , marked T 17 S R 4 E S 30 B T

An aspen , 6 ins. diam. , bears N. $24\frac{1}{2}^{\circ}$ W. , 42 lks. dist. , marked T 17 S R 4 E S 19 B T

Land, rough and rolling mountainous ; with a general W. exposure , and lying at the foot of high breaks of mountain.

Soil , generally decayed vegetation mixed with rocks and gravel , on a hard , moist sub-soil of rich loam and rocks. , 3 rd. rate.

Timber , dense aspen and some scattering patches of spruce , balsam fir and pine , of good commercial value.

Undergrowth , choke cherry , service , willow and chaparral.

Some good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 80.00 chs.

September 20: At this sec. cor. ; I set off $1^{\circ}06'$ N. , on the decl. arc ; and at 11 h. 54 m. a. m. l. m. t. , observe the sun on the meridian , the resulting lat. is $39^{\circ} 19'$

Subdivision of T. 17 S., R. 4 E.

chains

September 27: At 1 h. 51 m. p. m. l. m. t., I set off 39° 19' N., on the lat. arc ; 1° 38' S., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 19 , 20 , 29 and 36.

Thence I run East , on a random line bet. secs. 20 and 29

40.00 Set temp. 1/4 sec. cor.

Cease work.

September 27 , 1913

September 29 : At 8 h. 50 m. a. m. l. m. t., I set off 39° 19' N., on the lat. arc ; 2° 20' S., on the decl. arc ; and determine a meridian with the solar at the temp. 1/4 sec. cor. bet. secs. 20 and 29.

Thence I run East, on random line.

79.85 Intersect N. and S. line , 12 lks. N. of the cor. of secs. 20 , 21 , 28 and 29.

Thence

N. 89° 55' W., on true line bet. secs. 20 and 29

Over rough mountainous land along precipitous N. face of Hay Stack Mountain , across series of broken limestone ledges , through scattering spruce and balsam fir timber and undergrowth of chaparral.

5.85 Descend abruptly into gulch.

7.80 Bottom of gulch , 75 ft. below sec. cor., course NW.

Ascend abruptly.

16.66 Top of spur , 100 ft. above gulch, projects N.

Descend abruptly 50 ft. to

19.40 Gulch , course N.

Ascend abruptly.

22.35 Leave timber , bears N. and S.

23.57 Top of high spur of Hay Stack mountain, bears N. and S.

Subdivision of T. 17 S., R. 4 E.

chains

September 29: At this station, I set off 2° 23' S., on the decl. arc; and at 11 h. 50 m. a. m. l. m. t., observe the sun on the meridian, the resulting lat. is 39° 19'.

Descend abruptly over W. face of mountain.

39.92 150 ft. below top of mountain,

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked

S 20
1/4

S 29

.1913

from which

An aspen, 6 ins. diam., bears S. 55 1/2° E., 13 lks. dist., marked 1/4 S 29 B T

An aspen, 5 ins. diam., bears N. 43 1/4° W., 32 lks. dist., marked 1/4 S 20 B T

40.78 Leave scattering timber, bears N. and S.

41.27 Enter dense aspen thicket, bears N. and S.

43.55 Leave aspen thicket.

45.54 Enter dense timber, bears NW. and S.

59.46 Dim wagon road, bears NE. and SW.

68.44 Leave dense timber, bears NW. and S.

72.14 Enter dense aspen thicket, bears N. and S.

79.85 The cor. of secs. 19, 20, 29 and 30.

Land, rough mountainous.

E. 23.57 chs., precipitous N. face of Hay Stack mountain consisting of broken limestone ledges and covered with a scattering growth of spruce, balsam fir and pine timber. Soil, rocks, with some dirt caused by the disintegration of rocks, on a sub-soil of rocks, 4 th. rate.

W. 56.28 chs., western slope of high mountain.

Soil, decayed vegetation, black loam and rocks, on a

Subdivision of T. 17 S., R. 4 E.

chains

hard , moist sub-soil of decayed vegetation and rocks
 ; 3 rd. rate.
 Timber , dense aspen, and scattering patches of spruce,
 balsam fir , and pine of good commercial value.
 Undergrowth , chaparral.
 Land mountainous , heavily timbered and covered with
 dense undergrowth, 79.85 chs.

September 29 , 1913

September 26 : At 8 h. 51 m. a. m. l. m. t., I set off
 39° 19' N., on the lat. arc ; 1° 10' S., on the decl. arc;
 and determine a meridian with the solar at the cor. of
 secs. 19 , 20 , 29, and 30.

Thence I run
 N. 89° 58' W., on true line bet. secs. 19 and 30.

Over rough mountainous land with a general W. drainage ,
 through dense forest of aspen and undergrowth of chaparral
 and sage brush.

- 6.25 Leave dense aspen timber , enter scattering spruce ,
 balsam fir and pine timber.
- 21.32 Base of descent , 100 ft. below sec. cor., bears N. and
 A small pond of stagnant water , with no visible outlet,
 and containing about 1 acre of land , bears N. 13 chs.
- 24.71 Leave timber , bears N. and S.
 Ascend abruptly through dense sage brush.
- 26.11 Top of ridge , 100 ft. above base , bears N. 20° W. and SE.
- 30.61 Enter dense spruce and aspen timber , bears N. and S.
 Descend abruptly over W. face of ridge.
- 40.00 Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
 in the ground for ¼ sec. cor. , with brass cap marked

Subdivision of T. 17 S., R. 4 E.

chains

S 19

1/4

S 30

1913

from which

An aspen , 6 ins. diam. , bears N. 43 1/4 ° E. , 31 lks. dist. , marked 1/4 S 19 B T

An aspen , 14 ins. diam. , bears S. 65 ° W. , 7 lks. dist. , marked 1/4 S 30 B T

September 26: At this 1/4 sec. cor. , I set off 1° 13' S. , on the decl arc ; and at 11 h. 51 m. a. m. l. m. t. , observe the sun on the meridian , the resulting lat. is 39° 19'.

56.03 Leave dense timber , bears N. and S.

Gradually descend.

57.82 Spring branch , 3 lks. wide , 1 in. deep , good water , course NW.

Gradually ascend.

59.90 Enter dense aspen thicket , bears N. and S.

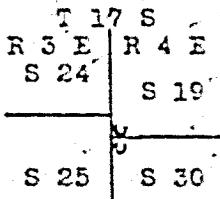
71.19 Old wagon road , bears NE. and SW.

72.69 Leave timber , bears N. and S.

Thence over land facing nearly S. , through dense orange brush and service brush.

78.60 Intersect W. bdy of the tp. 3.10 chs. , S. 0° 10' E. , of the cor. of secs. 24 and 25 heretofore described.

At intersection , Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins. in the ground for closing cor. of secs. 19 and 30 , with brass cap marked



1913

dig. pits , 24 x 18 x 12 ins. , crosswise on each line ,

Subdivision of T. 17 S., R. 4 E.

chains

N. and S., 3 ft., and E. of post, 7 ft. dist., raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor.

Land rough and rolling mountainous, with a general N. drainage and with E. and W. slopes of ridges,

Soil, gravelly and decayed vegetation mixed with some rich black loam, on a hard, moist, rich black loam and gravelly sub-soil; 2nd rate.

Timber, dense aspen and scattering spruce, balsam fir and pine, of good commercial value.

Undergrowth; chaparral, sage, service and some oak brush.

Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with dense undergrowth 78.60 chs.

September 26, 1913.

September 20: For solar observation, see line bet. secs. 29 and 30.

N. 0° 03' W., bet. secs. 19 and 20

Over rough mountainous land draining W., through dense forest of aspen and scattering spruce and pine and undergrowth of chaparral, buck brush and willow.

Gradually descend over land facing nearly W.

27.30 Base of steep descent, bears NW. and SE.

Gradually descend.

28.60 Spring branch, 4 lks. wide, 2 ins. deep, good water, course NW.

Gradually ascend.

30.35 Leave timber, bears NW. and SE.

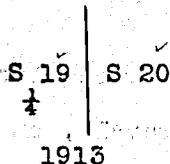
40.00 200 ft. above creek.

Set an iron post, 3 ft. long, 1 1/2 in. in dia., 24 ins.

Subdivision of T. 17 S., R. 4 E.

chains

in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked



raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

September 20, 1913

September 25: Heavey fog delays work until 10 a. m.

At 9 h. 52 m. a. m. l. m. t., I set off $39^{\circ} 19'$ N. on the lat. arc; $0^{\circ} 47'$ S., on the decl. arc; and determine a meridian with the solar at the $\frac{1}{4}$ sec. cor. bet. secs. 19 and 20.

Thence I run

N. $0^{\circ} 03'$ W..

41.00 Spur, 10 ft. above $\frac{1}{4}$ sec. cor., bears NW. and SE.

Descend through dense undergrowth of oak and sage brush.

47.45 Hollow, 60 ft. deep, course NW.

Ascend.

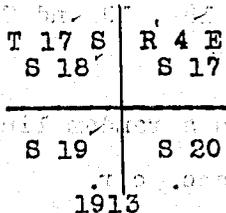
48.23 Enter aspen thicket, bears E. and W.

50.68 Leave aspen thicket.

64.17 Top of spur, 100 ft. above hollow, projects NW.

Thence over rolling ground sloping W.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base, 1 ft. high, for cor. of secs. 17, 18, 19 and 20, with brass cap marked



raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles I am unable to set post, more than 12 ins. in the ground.

Subdivision of T. 17 S., R. 4 E.

chains

Land, rough and rolling mountainous with a general W. exposure.

Soil, generally a rich black loam and decayed vegetation mixed with some gravel, on a hard, moist and rich sub-soil of black loam and gravel; 2nd. rate. Some rocky outcroppings throughout mile.

Timber dense aspen with occasional patches of spruce, balsam fir and pine, on S. 30.34 chs. This timber is good for commercial purposes.

Undergrowth, sage, oak, chaparral and service brush. Excellent grazing on this mile, but too steep for farming purposes.

Land mountainous, heavily timbered and covered with dense undergrowth, 80.00 chs.

September 25: At this sec. cor. I set off 0° 49' S., on the decl. arc; and at 11 h. 52 m. a. m. 1. m. t., observe the sun on the meridian, the resulting lat. is 39° 20'.

Thos. C. Rastbach

U. S. Transitman.

September 27: At 7 h. 51 m. a. m. 1. m. t., I set off 39° 20' N., on the lat. arc; 1° 31' S., on the decl. arc; and determine a meridian with the solar at the cor. of secs. 17, 18, 19 and 20

Thence I run

S. 89° 55' E., on a random line bet. secs. 17 and 20

40.00 Set temp. 1/4 sec. cor.

79.88 Intersect N. and S. line 7 lks. S. of the cor. of secs. 16, 17, 20 and 21

Thence

N. 89° 58' W., on true line bet. secs. 17 and 20.

Subdivision of T. 17 S., R. 4 E.

chains

Over rough mountainous land sloping and draining N., through forest of aspen, spruce, balsam fir and pine and undergrowth of chaparral, service brush and willow.

Gradually ascend

3.00 Top of small spur, 20 ft. above sec. cor., projects N. Gradually descend.

5.80 Spring branch, 3 lks. wide, 2 ins. deep, good water, course N.

7.80 Enter dense timber. Descend abruptly.

11.00 County road, from Ephraim, Utah to Emery County, bears N. 40° W. and S. 40° E. Road is in a small hollow, draining N., 60 ft. below top of spur. Gradually ascend.

22.10 Spring branch, 3 lks. wide, 2 ins. deep, good water, course N.

23.95 Top of spur, 40 ft. above hollow, projects N. Thence over nearly level land.

26.00 Leave timber, enter opening, bears N. and S.

27.50 Old road, bears N. and S.

31.00 Spring branch, 3 lks. wide, 2 ins. deep, good water, course N. Enter timber, bears N. and S.

35.60 Spring branch, 5 lks. wide, 2 ins. deep, good water, course N. Gradually ascend.

36.00 Leave timber, enter opening, bears N. and S.

39.00 Enter timber, bears N. and S.

39.94 At base of steep ascent on E. slope of spur. Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S 17
4

S 20
1913

Subdivision of T. 17 S., R. 4 E.

chains

from which

An aspen, 10 ins. diam., bears N. 11° E., 32 lks.

dist., marked $\frac{1}{4}$ S 17 B TA spruce, 8 ins. diam., bears S. 7 $\frac{1}{2}$ ° W., 36 lks.dist., marked $\frac{1}{4}$ S 20 B T

Ascend abruptly.

40.50 Leave timber, bears N. and S.

43.30 Telephone line controlled by the U. S. Forest Service,
N. 50° W. and S. 50° E.Top of ridge, 35 ft. above $\frac{1}{4}$ sec. cor., bears N. and S.

Gradually descend.

45.30 Enter dense aspen thicket, bears N. and S.

56.00 Top of steep descent, bears N. and S. Descend abruptly
over W. slope of spur.60.50 Enter exceptionally dense willow, and service brush, bears
N. and S.

62.40 Base of descent, 60 ft. below spur, bears N. and S.

Thence over nearly level land on bench.

73.00 Old wagon road and top of spur, bears N. and S.

Leave timber, thence descend over W. slope of mountain
through dense undergrowth of sage, chaparral, oak,
service and buck brush.

79.88 The cor. of secs. 17, 18, 19 and 20.

Land mountainous with a general N. and W. drainage and
with E. and W. slopes of ridges.Soil, gravelly and rocky mixed with some rich black
loam and decayed vegetation on a hard, moist sub-soil of
rich black loam and rocks; 3 rd. rate.Timber, dense aspen and some scattering patches of
spruce, balsam fir and pine.Undergrowth, sage, chaparral, service, willow,
and oak brush.

Good grass for grazing purposes.

Land mountainous, heavily timbered and covered with
dense undergrowth 79.88 chs.

September 27 : At this sec. cor., I set off 1° 36' S.,

Subdivision of T. 17 S., R. 4 E.

chains

on the decl. arc ; and at 11 h. 51 m. a. m. 1. m. t., observe the sun on the meridian ; the resulting lat. is 39° 20'.

September 28 : At 8 h. 51 m. a. m. 1. m. t., I set off 39° 20' N. on the lat. arc ; 1° 55' S., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 17 , 18 , 19 and 20.

Thence I run

N. 89° 58' W., on true line , bet. secs. 18 and 19 Over rolling mountainous land draining NW., through dense undergrowth of oak , sage , service and chaparral. Gradually descend over gentle W. slope.

40.00

100 ft. below sec. cor. Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in a mound of stone and earth , 4 ft. base , 2 ft. high for 1/4 sec. cor., with brass cap marked

S 18

S 19

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , N. of cor.

Note : On account of natural obstacles I am unable to set post in the ground.

41.00

Top of steep descent , bears NW. and SE. Descend abruptly into canyon through dense undergrowth of oak , maple , service and willow brush.

58.00

Spring branch , in hollow , 3 lks. wide , 2 ins. deep , good water , 75 ft. below top of descent , course NW. Ascend abruptly over E. face of spur.

60.80

Top of spur , 50 ft. above hollow , projects N.

Subdivision of T. 17 S., R. 4 E.

chains

Descend abruptly.

66.50 Hollow , 75 ft. below spur , course N.

Ascend abruptly.

73.41 Top of east slope of bench , 100 ft. above hollow , bears NW. and SE.

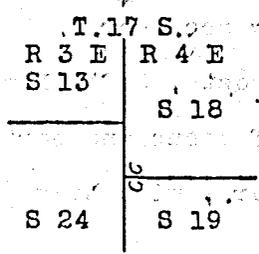
Thence over top of bench , through dense oak brush.

75.07 Wire fence , bears N. and S.

75.36 Wagon road , bears NW. and SE.

75.79 Intersect W. bdy. of the tp. 6.10 chs. S. 1°50' W. of the cor. of secs. 13 and 24 heretofore described.

At intersection , Set an iron post , 3 ft. long , 2 ins. in dia. , 24 ins. in a mound of stone and earth , 4 ft. base , 2 ft. high , for closing cor. of secs. 18 and 19 , with brass cap marked



1913

raise a mound of stone , 2 ft. base , 1 1/2 ft. high . E. cor.

Note : On account of natural obstacles I am unable to set post in the ground.

Land , mountainous , with E. and W. slopes , and with a general NW. exposure.

Soil , gravelly , decayed vegetation and rocky , on a hard , moist sub-soil of decayed vegetation and rocks; 3 rd. rate.

Timber. , a few scattering aspen.

Undergrowth , sage , oak , service and maple , very thick in places.

Good grass for grazing purposes.

Land mountainous , heavily timbered or covered with

Subdivision of T.17 S., R.4 E.

chains.

dense undergrowth, 75.79 chs.

September 28 : At this closing cor., I set off 1° 59' S., on the decl. arc ; and at 11 h. 51 m. a. m. l. m. t. observe the sun on the meridian, the resulting lat. is 39° 20'.

September 28, 1913

Howard W. Miller

U. S. Surveyor.

September 25 : For solar observation see N. 1/2 mile, bet. secs. 19 and 20

N. 0° 03' W., bet. secs. 17 and 18.

Over rough mountainous land draing NW., through a few scattering aspen and dense undergrowth of sage, oak, service and buck brush.

Gradually ascend.

5.15 Top of low spur, projects NW.

Gradually descend through dense undergrowth.

22.00 Bottom of hollow, 50 ft. deep, course NW.

Gradually ascend.

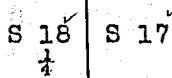
31.00 Telephone line controlled by the U. S. Forest Service, bears N. 80° W., and S. 80° E.

31.15 Top of spur, projects NW.

Descend.

40.00 50 ft. below top of spur.

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/4 sec. cor., with brass cap marked



1913

from which

A spruce, 12 ins. diam., bears S. 43 1/2° E., 97 lks.

Subdivision of T. 17 S., R. 4 E.

chains

dist., marked $\frac{1}{4}$ S 17 B T

An oak, 4 ins. diam., bears S. 61° W., 50 lks.

dist. marked $\frac{1}{4}$ S 18 B T

September 25, 1913

Thos. Matheson

U.S. Transitman.

September 27: For solar observation see line bet. secs. 17 and 20.

44.77 Hollow, 60 ft. below top of spur, course NW.

Gradually ascend.

49.08 Old road, bears E. and W.

52.60 Top of ridge, 50 ft. above hollow, bears N. 60° W. and S. 60° E.

Gradually descend into Ephraim Canyon.

63.22 Descend abruptly into canyon.

70.90 Base of steep descent and county road, from Ephraim, Utah to Emery County, bears E. and W.

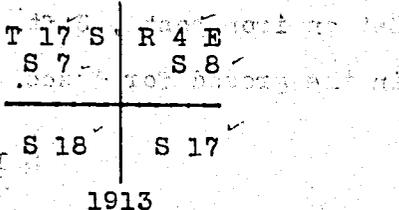
A dug way on S. side of canyon starts 5 chs. W.

75.70 Ephraim Creek, in bottom of canyon, 20 lks. wide, 10 to 12 ins. deep, good water, 200 ft. below top of spur, course W.

Ascend abruptly from canyon.

80.00 Top of steep ascent, bears E. and W.

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 7, 8, 17 and 18, with brass cap marked



from which

An oak, 5 ins. diam., bears N. 72½° E., 129 lks.

dist., marked T 17 S R 4 E S 8 B T

Subdivision of T. 17 S.; R. 4 E.

chains

A pinon , 6 ins. diam., bears S 65 1/2 ° E., 35 lks.

dist., marked T 17 S R 4 E S 17 B T.

A cedar , 12 ins. diam., bears S. 44 1/2 ° W., 56 lks.

dist., marked T 17 S R 4 E S 18 B T

A cedar , 6 ins. diam., bears N. 40 3/4 ° W., 211 lks.

dist., marked T 17 S R 4 E S 7 B T

Land , mountainous , with a general W. exposure and with steep N. and S. slopes into canyon.

Soil , generally decayed vegetation and gravelly of good quality , on a hard , moist sub-soil of rich black loam and rocks ; 3 rd. rate.

Timber , scattering aspen on S. 60.00 chs. and a few cedar on N. 5 chs.

Undergrowth , dense oak , sage , service and maple.

Some good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth , 80.00 chs.

September 27 , 1913.

Howard Miller

U. S. Surveyor.

September 28 : At 8 h. 51 m. a. m. l. m. t., I set off 39° 21' N., on the lat. arc.; 1° 56' S., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 7., 8., 17 and 18

Thence I run

S. 89° 58' E., on a random line bet. secs. 8 and 17

40.00 Set temp. 1/4 sec. cor. of sec. 8.

80.14 Intersect N. and S. line 12 lks. N. of the cor. of secs. 8., 9., 16 and 17

Subdivision of T. 17 S., R. 4 E.

chains

Thence ...
N. 89° 53' W., on true line, bet. secs. 8 and 17.

Over rough mountainous land on N. side of high ridge,
through dense forest of spruce, balsam fir, pine and
some aspen and undergrowth of chaparral.

Descend rapidly into canyon.

22.07 Creek in canyon, 8 lks. wide, 3 ins. deep, good water
150 ft. below sec. cor., course SW.

Ascend gradually, then descend

25.07 Same creek, course NW.

Leave dense timber, enter dense undergrowth of oak
and maple, bears N. and S.

Ascend

34.50 Spur, 200 ft. above creek, projects N.

Descend abruptly.

40.07 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins.
the ground for 1/4 sec. cor., with brass cap marked

S 8
1/4

S 17

1913

from which

A pine, 16 ins. diam., bears N. 32° E., 148 lks.

dist., marked 1/4 S 8 B.T.

A pine, 6 ins. diam., bears S. 14 1/2° E., 127 lks.

dist., marked 1/4 S 17 B.T.

49.98 Creek in canyon, 8 lks. wide, 3 ins. deep, good water
course S. 60° W.

Ascend abruptly.

56.94 Spur, 125 ft. above canyon, projects SW.

September 28: at this station I set off 1° 59' S., on
the decl. arc; and at 11 h. 51 m. a. m. l. m. t.,
observe the sun on the meridian; the resulting lat.
is 39° 21'.

Subdivision of T.17 S., R.4 E.

chains

Thence gradually descend over land sloping S. into Ephraim canyon.

80.14

The cor. of secs. 7, 8, 17 and 18

Land, rough mountainous sloping N. and S. into canyons and with a general westerly drain.

Soil, generally a light clay loam and decayed vegetation mixed with some gravel and rocks, on a hard, moist sub-soil of rich loam and rocks; 3 rd. rate.

Timber, valuable spruce, balsam fir and pine on E.

35.00 chs., and some scrub cedar and pinon on W. 45.14 chains.

Undergrowth, chaparral, oak, service and maple.

Some good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.14 chs.

September 28, 1913.

October 11 : At 8 h., 47 m. a. m. 1. m. t., I set off. 39° 21' N., on the lat. arc; 6° 57' S., on the decl. arc; and determine a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.

Thence I run

N. 89° 58' W., on true line bet. secs. 7 and 18.

Over rough mountainous land facing S., on N. brink of Ephraim canyon, through scattering scrub cedar and pinon timber and dense undergrowth of service, buck, and sage brush.

Gradually descend.

17.00

Enter aspen thicket, bears N. and S.

20.00

Leave aspen thicket.

40.00

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for 1/2 sec. cor., with brass cap marked

Subdivision of T. 17 S., R. 4 E.

chains.

S 7
 1/4
 S 18
 1913
 from which
 A pinon, 7 ins. diam., bears N. 9 1/4° E., 78 lks.
 dist., marked 1/4 S 7 B T
 A cedar, 10 ins. diam., bears S. 27 1/4° W., 26 lks.
 dist., marked 1/4 S 18 B T
 October 11 : At this 1/4 sec. cor., I set off 7° 00' S.,
 on the decl. arc ; and 11 h. 47 m. a. m. 1. m. t.,
 observe the sun on the meridian, the resulting lat. is
 39° 21'
 45.50 Begin abrupt descent.
 66.00 Stream of clear, pure water, 6 lks. wide, 4 ins.
 deep, course S.
 Ascend abruptly.
 68.00 Top of abrupt ascent, thence gradually descend over point
 of ridge.
 73.80 Wire fence, bears N. and S.
 74.76 Intersect. W. bdy. of the tp., 7.59 chs., S. 1° 18' E., of
 the cor. of secs. 12 and 13 heretofore described
 At intersection, set an iron post, 3 ft. long, 2 ins.
 in dia., 24 ins. in the ground for closing cor. of secs.
 7 and 18, with brass cap marked
 T 17 S
 R 3 E | R 4 E
 S 12 | S 7
 S 13 | S 18
 1913
 from which
 A pinon, 8 ins. diam., bears N. 21 1/2° E., 26 lks.
 dist., marked CC T 17 S R 4 E S 7 B T
 A pinon, 10 ins. diam., bears S. 14 1/4° E., 98 lks.

Subdivision of T.17 S., R.4 E.

chains

dist., marked CC T 17 S R 4 E S 18 B T

Land rough mountainous with a S. slope into Ephraim canyon.

Soil, rocky and clay, on a hard clay and rock sub-soil; 3 rd. rate.

Timber scattering scrub cedar and pinon of no commercial value.

Undergrowth, service, buck and sage brush.

Some grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 74.76 chs.

October 11, 1913

September 30 : At 7 h. 50 m. a. m. 1. m. t., I set off $39^{\circ} 21' N.$, on the lat. arc; $2^{\circ} 41' S.$, on the decl. arc; and determine a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.

Thence I run

$N.0^{\circ}03'W.$, bet. secs. 7 and 8.

Over rough mountainous land, through scattering scrub cedars and pinon timber, and undergrowth of chaparral and service brush.

Gradually ascend.

3.95 Base of steep ascent, bears E. and W.

Ascend abruptly over broken S. face of ridge.

19.00 top of ridge, 200 ft. above sec. cor., bears E. and W.

Leave timber, enter dense oak and buck brush.

19.56 Wagon road, bears E. and W.

Gradually descend.

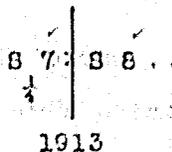
32.27 Hollow, 75 ft. below top of ridge, course NW.

Thence over land sloping almost W.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

Subdivision of T. 17 S., R. 4 E.

chains

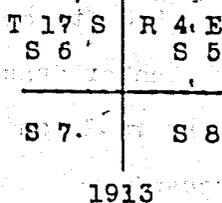


from which

An oak , 5 ins. diam. , bears N. 84° E. , 45 lks.
dist. , marked $\frac{1}{4}$ S 8 B T

An oak , 4 ins. diam. , bears S. 84½° W. , 12 lks.
dist. , marked $\frac{1}{4}$ S 7 B T.

- 48.78 Enter dense maple thicket , bears E. and W.
- 54.43 Old road , bears NE. and SW.
- 57.33 Leave maple thicket , bears E. and W.
- 63.89 Enter dense hawthorne thicket , bears E. and W.
- 66.89 Spring branch , 2 lks. wide , 2 ins. deep , good water ,
course NW.
- 68.80 Leave hawthorne thicket , bears E. and W.
- 71.28 Base of descent and N. fork of Ephraim Canyon , bears
NE. and SW.
- 73.81 N. fork of Ephraim Creek , 20 lks. wide , 4 to 6 ins.
deep , good water , course SW.
- 74.51 Road in canyon , bears NE. and SW.
- 74.80 Leave canyon bottom , bears NE. and SW.
Ascend abruptly over S. face of mountain.
- 80.00 60 ft. above creek.
Set an iron post , 3 ft. long , 2 ins. in dia. , 12 ins.
in the ground and 12 ins. in a mound of stone and earth
4 ft. base , 1 ft. high , for cor. of secs. 5 , 6 , 7
and 8 , with brass cap marked



raise a mound of stone , 2 ft. base , 1½ ft. high , W.
of cor.

Note: On account of natural obstacles I am unable to

chains

set post more than 12 ins. in the ground.

Land, rough and rolling mountainous with N. and S. slopes into canyons.

Soil, stony and gravelly, mixed with some rich, black loam, on a hard, moist sub-soil of rich black loam and rocks, 3 rd. rate.

Timber scrub cedar and pinon on S., 19.00 chs.

Undergrowth, dense chaparral, oak, maple, hawthorne, service and sage brush.

Some good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 80.00 chs.

September 30 : At this sec. cor., I set off $2^{\circ} 46'$ S., on the decl. arc; and at 11 h. 50 m. a. m. 1. m. t., observe the sun on the meridian; the resulting lat. is $39^{\circ} 22'$.

40.00

S. $89^{\circ} 53'$ E., on a random line bet. secs. 5 and 8
 Set temp. $\frac{1}{4}$ sec. cor.
 Cease work

September 30, 1913

October 1 : For solar observation see N. $\frac{1}{2}$ mile bet. secs. 8 and 9.

October 1 : At this temp. $\frac{1}{4}$ sec. cor., I set off $3^{\circ} 09'$ S., on the decl. arc; and at 11 h. 50 m. a. m. 1. m. t., observe the sun on the meridian; the resulting lat. is $39^{\circ} 22'$

80.14

Intersect N. and S. line 21 lks. S., of the cor. of secs. 4, 5, 8 and 9

Thence

S. $89^{\circ} 58'$ W., on true line bet. secs. 5 and 8
 Over rough mountainous land, along N. slope of high mountain ridge, through dense forest of spruce,

Subdivision of T.17 S., R. 4 E.

chains

balsam fir, pine and some aspen and undergrowth of
choke cherry, buck, service and oak brush.

11.10 Top of spur, projects NW.
Descend abruptly.

16.00 Base of steep descent, thence over NW slope, grad-
ually descending.

20.00 Leave timber, thence through exceptionally heavy
brush.

40.07 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins.
in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked
S 5
S 8
1913
raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N.
of cor.

51.45 Spring branch, in hollow, 2 lks. wide, 1 in. deep,
good water, course NW.
Ascend abruptly.

54.95 Spur, 50 ft. above creek, projects NW.
Descend into Ephraim Canyon.

68.90 Bottom of canyon and N. fork of Ephraim Canyon, 20 lks.
wide, 6 to 8 ins. deep, good water, 125 ft. below
spur, course SW.

71.18 Road in canyon, bears NE. and SW
Ascend abruptly.

80.14 The cor. of secs. 5, 6, 7 and 8
Land, rough mountainous, sloping NW. and SE into N.
fork of Ephraim Canyon which drains SW.
Soil, rich black loam and gravelly, on a hard, moist
sub-soil of loam and rocks., 3 rd. rate.
Timber, spruce, balsam fir, pine and some aspen of
good commercial value on E. 20.00 chs.
Undergrowth exceptionally dense, chaparral, oak,

Subdivision of T. 17 S., R. 4 E.

chains

sage . service , maple , buck and hawthorne brush.

Some good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth 80.14 chs.

October 1 , 1913

October 18 : At 8 h. 45 m. a. m. l. m. t., I set off 39° 22' N., on the lat. arc ; 9° 33' S., on the decl. arc ; and determine a meridian with the solar at the cor. of secs. 5 , 6 , 7 and 8

Thence I run

N. 89° 58' W. , on true line bet. secs. 6 and 7

Over rough mountainous land on N. side of N. fork of Ephraim canyon , through dense undergrowth of oak , service , buck , maple and chaparral.

Gradually descend.

15.45 Hollow , 50 ft. below sec. cor. , course S. 30° E.

Ascend abruptly.

22.00 Enter dense scrub cedar and pinon timber ; bears NE. and SW.

30.50 Top of highridge , 390 ft. above hollow , bears NE. and SW.

Leave timber , gradually descend.

40.00 On NW. slope of ridge.

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in the ground for $\frac{1}{4}$ sec. cor. , with brass cap marked

S 6
 $\frac{1}{4}$

S 7

1913

dig pits , 18 x 18 x 12 ins. , E. and W. of post . , 3 ft. dist. , raise a mound of earth , 3 ft. base , 1 $\frac{1}{2}$ ft.

Subdivision of T. 17 S., R. 4 E.

chains

high, N. of cor.

57.20 Hollow, 120 ft. below $\frac{1}{4}$ sec. cor., course NW.

Gradually ascend.

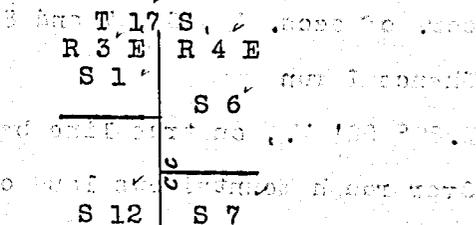
67.40 Spur, projects NW.

Descend.

74.03 Wire fence, bears N. and S.

76.40 Intersect W. bdy. of the tp., 7.42 chs., S. 1° 18' E., of the cor. of secs. 1 and 12, heretofore described.

At intersection, set an iron post; 3 ft. long, 2 ins. in dia., 24 ins. in the ground for closing cor. of secs. 6 and 7, with brass cap marked



1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor.

Land rough mountainous with general SE. and NW. exposures

Soil, generally gravelly and rocky, mixed with some rich black loam on a hard moist sub-soil of rich loam

and rocks; 3 rd. rate.

Timber, scrub cedar and pinon on 9.50 chs.

Undergrowth, chaparral, sage, oak, service and maple.

Some good grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense undergrowth 76.40 chs.

October 18: At this closing cor., I set off 9° 36' S., on the decl arc; and at 11 h. 45 m. a. m. l. m. t., observe the sun on the meridian; the resulting lat. is 39° 22'

October 18, 1913.

October 10: At 2 h. 47 m. a. m. l. m. t., I set off

39° 22' N., on the lat. arc; 6° 34' S., on the decl.

Subdivision of T.17 S., R.4 E.

Chains.

arc; and determine a meridian with the solar at the cor. of secs. 5, 6, 7, and 8. Thence I run

N.0° 03' W. on a random line bet. secs. 5 and 6,

40.00 Set temp. 1/4 sec. cor.

October 10: At this 1/4 sec. cor. I set off 6° 37' S. on the decl. arc; and at 11h 47m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is 39° 22'

86.92 Intersect N. bdy. of the Tp. 12 lks. W. of the cor. of secs. 5, 6, 31 and 32, heretofore described. Thence

S.0° 02' W. on true line bet. secs. 5 and 6,

Over rough mountainous land; through dense undergrowth of oak and chaparral. Ascend over N. face of ridge.

28.56 Top of N. side of high ridge, 200 ft. above sec. cor., bears NW. and SE. Leave heavy oak brush; enter dense sagebrush.

Gradually descend.

46.92 Set an iron post 3 ft. long, 1 in. in dia., 24 ins. in the ground, for 1/4 sec. cor., with brass cap marked

S 6 S 5
1913

dig pits 18 x 18 x 12 ins. N. and S. of post, 3 ft. dist.; raise a mound of earth 3 ft. base, 1 1/2 ft. high W. of cor.

Note: Cor. is situated in small opening on top of ridge.

62.59 Leave sagebrush; enter dense oak brush.

74.22 Top of S. side of ridge, bears E. and W. Enter dense service brush. Descend abruptly over S. face of ridge.

86.92 200 ft. below top of ridge. The cor. of secs. 5, 6, 7, and 8.

Land, rough, mountainous, with steep N. and S. slopes into canyons.

Soil, rocky, mixed with decayed vegetation and gravel, on a hard, moist subsoil of rocks and rich dirt; 3d rate.

No timber.

Undergrowth, dense oak, sage and chaparral.

Some good grass for grazing purposes.

Land, mountainous and covered with dense undergrowth

86.92 chs.

October 10, 1913.

J. S. Patton

Resurvey of the West Boundary of T.17 S., R.4 E.

Chains. Survey commenced September 17 and executed with a Young and Sons light mountain transit No.8584, with solar attachment. I know the instrument to be in perfect adjustment by recent tests made on Polaris.

September 17: I begin at the cor. of Tps. 17 and 18 S., Rs. 3 and 4 E., described in book "A" of this survey, lat. 39° 17' N.; longitude 111° 33' 42" W.

At 7h 55m a.m.l.m.t., I set off 39° 17' N. on the lat. arc; 2° 22' N. on the decl. arc; and determine a meridian with the solar. Thence I run

North, retracing along the west boundary of sec. 36
40.00 No trace of the old 1/4 sec. cor. can be found.
80.00 No trace of the cor. of secs. 25, 30, 31, and 36 can be found.

Set temp. cor. for future reference.

September 17: At this point I set off 2° 17' N. on the decl. arc; and at 11h 55m a.m.l.m.t., observe the sun on the meridian, the resulting latitude is 39° 18'

September 17, 1913.

September 19: At 7h 54m a.m.l.m.t., I set off 39° 18' N. on the lat. arc; 1° 36' N. on the decl. arc; and determine a meridian with the solar at my temp. cor. of

Thence I run

North, retracing along the west bdy. of sec. 30; and at 40:00 chs., I am unable to find any trace of the old 1/4 sec. cor., I therefore continue my line North, and at 82:90 chs.,

162.90 From the cor. of Tps. 17 and 18 S., Rs. 3 and 4 E., fall 47 lks. E. of the corner of sections 29, 24, 25, and

Re-survey of the west boundary of T. 17 S., R. 4 E.

chains

30', which is a limestone, 8 x 2 x 1 in. above ground, firmly set, and marked and witnessed as described, by the Surveyor General.

T. 17 S., R. 3 E., having been subdivided, this line will remain unchanged, therefore my falling answers to a correction of 23 1/2 lks. or 0° 10' per mile counting from the cor. of Tp's. 17 and 18 S., R's. 3 and 4 E.

I will return to the cor. of Tp's. 17 and 18 S., R's. 3 and 4 E., and re-survey this line setting 1/4 sec. and sec. cors. referring to two quarters and two secs. for T. 17 S., R. 3 E. at proportionate distances on line bet. the cor. of Tp's. 17 and 18 S., R's. 3 and 4 E., and the cor. of secs. 19, 24, 25 and 30.

September 19, 1913.

September 29: At 7 h. 50 m. a. m. l. m. t., I set off 39° 17' N., on the lat. arc; 2° 18' S., on the decl. arc; and determine a meridian with the solar at the cor. of Tp's. 17 and 18 S., R's. 3 and 4 E. heretofore described. Thence I run

N. 0° 10' W., re-surveying on the E. bdy of sec. 36. Over broken mountainous land draining NW., through dense forest of aspen, some scattering spruce and dense undergrowth of chaparral and oak brush.

Ascend

2.20 Spur, 25 ft. above stp. cor., projects W. Gradually descend.

11.95 Dry channel of stream, 40 ft. below spur, drains NW.

Ascend

17.35 Top of spur, 50 ft. above creek channel, projects W.

Re-survey of the west boundary of T. 17 S., R. 4 E.

chains

Gradually descend.

20.00 Leave timber, enter flat, bears E. and W.

23.75 Leave flat, enter heavy aspen timber, bears E. and W.
Descend gradually

40.72½ Proportionate measurement.
Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for ¼ sec. cor. on the E. bdy. of sec. 36 T. 17 S., R. 3 E., with brass cap marked

S 36
¼
1913

from which

An aspen, 5 ins. diam., bears N. 64° W., 5 lks. dist., marked ¼ S 36 B T

58.10 Branch of Willow Creek, 10 lks. wide, 3 to 6 ins. deep, good water, course N. 80° W.
Ascend.

62.07 Top of spur, 40 ft. above creek, projects W.
Gradually descend

67.75 Leave timber, enter sage brush opening, bears E. and W.

69.75 Leave opening, enter dense timber, bears E. and W.

76.00 Enter scattering aspen timber and dense sage brush undergrowth.

80.00 SE. cor. of pole fence, bears N. and W.

81.45 By proportionate measurement
Set an iron post, 3 ft. long, 3 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth, 4 ft. base, 1 ft. high, for cor. of secs. 25 and 36 on the E. bdy. of T. 17 S., R. 3 E., with brass cap marked

T 17 S
R 3 E
S 25
R 4 E
S 36
1913

from which

Re-survey of the West Boundary of T. 17 S. R. 4 E.

Chains

An aspen, 3 ins. diam., bears S. 60 $\frac{1}{2}$ ° W.,
16 lks. dist. marked T 17 S R 3 E S 36 B T.

An aspen 5 ins. diam., bears N. 58° W.,
14 $\frac{1}{2}$ lks. dist. marked T 17 S R 3 E S 25 B T.

Note: On account of natural obstacles I am unable to
set post more than 12 ins. in the ground.

Land rolling and broken mountainous with a general
NW. exposure.

Soil gravelly, rocky, decayed vegetation and some black
loam very shallow on hard moist gravelly black loam
and rocky subsoil, 3rd rate.

Timber, dense aspen and some scattering spruce.

Undergrowth, sage, oak and chaparral, very dense in
places.

Good bunch grass for grazing purposes.

Land mountainous, heavily timbered or covered with dense
undergrowth 81.45 chs.

September 29: At this sec. cor. I set off 2° 23' S. on
the decl. arc, and at 11h 50m a.m., l.m.t., observe
the sun on the meridian; the resulting latitude is 39°
18'.

N. 0° 10' W. re-surveying on the E. bdy. of sec. 25.

Over rolling and broken mountainous land with a general
NW. exposure.

Gradually ascend through heavy aspen timber and dense
undergrowth of sage, some chaparral, oak and service
brush, along west side of pole fence, bearing N. and S.

1.00 Leave aspen timber, bears E. and W., enter exceptionally
dense undergrowth of sagebrush.

9.10 Top of low flat spur, 30 ft. above sec. cor., projects
W.

Re-survey of the West Boundary of T. 17 S. R. 4 E.

Chains

Thence over nearly level land.

20.00 Enter dense aspen timber, bears E. and W.
Begin descent towards Willow Creek.

37.00 Willow Creek, 80 ft. below top of spur, 20 lks. wide, 3
to 6 ins. deep, good water, flows in rocky channel of
creek 1 ch. wide, course W.

40.72½ Proportionate measurement

Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in
the ground for $\frac{1}{4}$ sec. cor. on the E. bdy. of sec.
25, T. 17 S R 3 E., with brass cap marked

S $\frac{1}{4}$ 25

1913

from which

A yellow pine, 20 ins. diam., bears N. $51\frac{1}{2}^{\circ}$ W.,

49 lks. dist. marked $\frac{1}{4}$ S 25 B T.

41.65 Wire fence, bears E. and W.

41.70 Enter dense timber and heavy undergrowth, bears E. and
W.

Ascend abruptly.

46.00 An old log cabin bears East 2.50 chs.

46.20 Top of steep ascent, 60 ft. above creek, bears E. and W.
Leave heavy timber.

Gradually ascend.

53.75 Top of spur, 110 ft. above creek, projects W.

Enter exceptionally heavy aspen timber and undergrowth
of service and chaparral, bearing NW. and SE.

Descend.

72.50 Hollow, 100 ft. below spur, drains NW.

Leave aspen timber, bears NW. and SE.

Ascend over S. face of open sagebrush ridge.

81.45 Proportionate measurement and 80 ft. above hollow. The
cor. of secs. 19, 24, 25 and 30 heretofore described.

I destroy all traces of the old cor. and re-establish
it at the same point as follows:

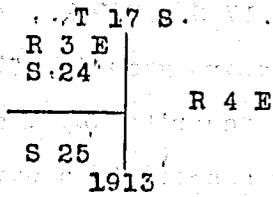
Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins.

"29"
127

Re-survey of the west boundary of T. 17 S., R. 4 E.

chains

in the ground for cor. of secs. 24 and 25 on the E. bdy. of T. 17 S., R. 3 E., with brass cap marked



dig pits, 24 x 24 x 12 ins., in each sec., 6 ft. dist., raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land rolling mountainous, with a general west exposure. Soil, gravelly and rocky, mixed with decayed vegetation and some rich black loam, on gravelly, stoney and rich black loam sub-soil, very moist but hard on account of the great amount of rainfall; 3 rd. rate. Timber, dense aspen and some scattering spruce. Undergrowth, sage, chaparral, service, choke cherry, and some oak brush, very dense in places. Good grass for grazing purposes. Aspen timber valuable for props in mines. Land, mountainous, heavily timbered or covered with dense undergrowth 81.45 chs.

September 29, 1913

September 19: For solar observation see line bet. secs. 25 and 30, W. bdy. of this tp.

From the cor. of secs. 24 and 25 heretofore described I run

North, retracing along the E. bdy. of sec. 24., T. 17 S., R. 3 E.

40.00 No trace of the old $\frac{1}{4}$ sec. cor can be found.

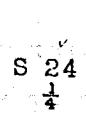
September 19: At this station I set off $1^{\circ} 31'$ N., on the decl. arc; and at 11 h. 54 m. a. m. l. m. t., observe the sun on the meridian; the resulting lat. is $39^{\circ} 20'$ which is within $\frac{1}{2}'$ of the proper lat.

Not being able to find this $\frac{1}{4}$ sec. cor. I continue my line North, making careful searches for sec. and $\frac{1}{4}$

Re-survey of the west boundary of T.17 S., R. 4 E.

chains

sec. cors. at intervals of 40.00 chs., and at
 124.32 Fall 3.98 chs. W. of the $\frac{1}{4}$ sec. cor. on the E. bdy. of
 sec. 13., T.17 S., R.3 E., which is a sandstone 11 x
 9 x 7 ins., above ground, firmly set, and marked and
 witnessed as described by the Surveyor General.
 This falling answers to a correction of $132\frac{2}{3}$ lks. or
 $1^{\circ} 50'$ per half mile counting from the cor. of secs. 24
 and 25. I return to the cor. of secs. 24 and 25
 Thence I run
 N. $1^{\circ} 50'$ E., re-surveying on the E. bdy. of sec. 24
 Over broken mountainous land draining NW., through
 dense undergrowth of chaparral, sage and service
 brush.
 Ascend over S. face of spur.
 1.80 Top of spur, projects W.
 Gradually descend towards Ephraim Canyon over land slop-
 ing nearly N.
 8.00 Enter dense forest of aspen, bears NW. and SE., begin
 steeper descent.
 41.46 Proportionate measurement and a northing of 41.44 chs.
 Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in
 the ground for $\frac{1}{4}$ sec. cor. on the E. bdy. of sec. 24,
 T.17 S., R.3 E., with brass cap marked



1913

from which

An aspen, 6 ins. diam., bears N. $78\frac{1}{2}^{\circ}$ W., 13 lks.
dist., marked $\frac{1}{4}$ S 24 B T

42.00 Enter exceptionally heavy undergrowth of willows and
 service brush, bearing NW. and SE.
 51.60 Old wagon road, bears NW. and SE.
 54.20 Wash, 40 ft. below $\frac{1}{4}$ sec. cor., drains NE.
 57.60 Enter dense forest of spruce, balsam fir, pine and
 undergrowth of oak brush. Descend more gradually.
 60.60 Hollow, 120 ft. below $\frac{1}{4}$ sec. cor., drains NE.

"31"
129

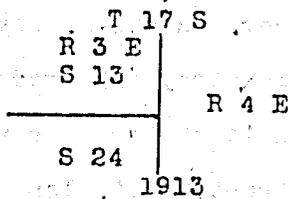
Re-survey of the west boundary of T. 17 S., R. 4 E.

chains

- 63.10 Wire fence , bears E. 4 chs. and W.
- 67.50 Spring branch, 2 lks. wide, 1 in. deep, good water, course N.10°E.
- 69.00 Spring branch, 5 lks. wide, 2 ins. deep, good water, course N.20°E.
- 72.00 Creek, 10 lks. wide, 3 to 6 ins. deep, good water, course N.40°W.

Leave timber, bears NW. and SE., ascend over SW. face of spur.

- 76.80 Wire fence, bears NW. and SE.
- 77.50 Wagon road, bears NW. and SE.
- 78.00 Top of spur, 50 ft. above creek, projects NW.
- 79.00 Descend abruptly over steep NE. slope 75 ft. to
- 82.92 Proportionate measurement and a northing of 82.88 chs., Set an iron post, 3 ft. long , 3 ins. in dia., 24 ins. in the ground for cor. of secs. 13 and 24 on the E. bdy. of T.17 S., R.3 E., with brass cap marked



raise a mound of stone , 2 ft. base , 1½ ft. high. W. of cor.

Land rolling and broken mountainous, with a general NW. exposure and slope towards Ephraim Canyon.

Soil, decayed vegetation, rocky and gravelly mixed with a rich black loam , very shallow, on a hard , moist black loam and rocky sub-soil ; 3 rd. rate.

Timber, dense aspen , spruce , balsam fir and some pine.

Spruce , balsam fir and pine on N.½ mile. Aspen timber valuable for mining props.

Undergrowth , exceptionally dense chaparral, willow, service, choke cherry , sage and some maple.

Good grass for grazing purposes.

Land mountainous , heavily timbered and covered with dense undergrowth 82.92 chs.

Re-survey of the west boundary of T. 17 S., R. 4 E.

chains

N. 1° 50' E., re-surveying on the E. bdy. of sec. 13

Over rough mountainous land draining NW., through dense undergrowth of oak, service, maple and chaparral.

Descend towards canyon.

11.00 Pipe line for Ephraim, city water works, bears NW. and SE.

Descend abruptly.

23.30 Wash in canyon, 10 lks. wide, 3 ft. deep, 125 ft. below sec. cor., drains NW.

Gradually ascend over gentle west slope.

25.00 Wire fence and west boundary of the Manti National Forest Reserve, bears N. and S.

Thence along E. side of fence.

35.90 County road, from Ephraim, Utah, to Emery County, bears N. 80° E. and S. 80° W.

41.464 Proportionate measurement and a northing of 41.44 chs

The 1/4 sec. cor. on the E. bdy of sec. 13 heretofore

described. I destroy all traces of the old cor. and

re-establish it at the same point as follows:

Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in

the ground and 12 ins. in a mound of earth and stone

4 ft. base, 1 ft. high, for 1/4 sec. cor on the E. bdy.

of sec. 13, T. 17 S., R. 3 E., with brass cap marked

S. 13

1/4

1913

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Note: On account of underlying rock I am unable to set post more than 12 ins. in the ground.

Land mountainous with a general NW. and W. exposure,

sloping E. and NE. on S. 23.30 chs. and nearly W. to

valley on N. 18.41 chs.

36
131

Re-survey of the West boundary of T.17 S., R.4 E.

chains

Soil, decayed vegetation, gravelly, rocky and some black loam on a shallow sub-soil of hard, moist black loam and rocks; 3 rd. rate.

Timber, a few spruce.

Undergrowth, exceptionally dense oak, service, maple and chaparral. Good grass for grazing purposes.

Sept. 19, 1913,

Howard W. Miller

U. S. Surveyor.

Survey commenced October 3, 1913 and executed with Young and sons light mountain transit No. 8538, with Smith solar attachment. For description and test of instrument see subdivision of T.17 S., R.4 E. I know the instrument to be in good adjustment from recent tests made on Polaris and recorded in the notes of the subdivision of T.17 S., R.4 E.

At 7h.49m. am. lmt., I set off $39^{\circ} 20'$ on the lat. arc; $3^{\circ} 51'S.$, on the decl. arc; and determine a meridian with the solar at the $\frac{1}{4}$ sec. cor. on the E. bdy. sec. 13, T.17 S., R.3 E.

Thence I run

North, retracing along the E. bdy. sec. 13.

40.00 After a long and careful search, I am unable to find any trace of the old cor. secs. 7, 12, 13 and 18., I therefore continue my line North, making long and careful searches at intervals of 40.00 chs, for $\frac{1}{4}$ sec. and sec. cors. and at 199.15 chs. Intersect E. and W. line 4.51 chs. E. of cor. of Tps. 16 and 17 S., R's. 3 and 4 E., which is a sandstone 16x12x4 ins. above ground, firmly set and mkd. and witnessed as described by the Surveyor General. This falling answers to a correction of 1.804 chs. or $1^{\circ} 18'$ per mile counting from the $\frac{1}{4}$ sec. cor. on the E. bdy. sec. 13.

Thence

N. $1^{\circ} 18' W.$, re-surveying on the E. bdy. sec. 13

Over rough mountainous land draining nearly west, through

Re-survey of the west boundary of T.17 S., R.4 E.

- chains
- scattering forest of scrub cedar and pinon and undergrowth of oak, buck and service brush.
- Gradually ascend.
- 4.00 Telephone line (Controlled by U.S. Forest Service) bears E. and W.
- 4.20 Top of ridge spur, 40 ft. above $\frac{1}{4}$ sec. cor., bears E. & W. Thence over broken ground, gradually descending towards Ephraim Canyon.
- 19.65 Ephraim City Powerditch which carries about 20 second ft. of water, flows SW.
- Descend abruptly into canyon.
- 24.46 Bottom of Ephraim Canyon and creek, 60 lks. wide, 3 to 6 ins. deep, good water; flows in large rocky wash, 1.50 chs. wide, 350 ft. below top of ridge, course S.80°W.
- Ascend abruptly from canyon over rough rocky S. slope of spur.
- 34.00 Top of long mountain spur, 200 ft. above creek, bears E. and W. Wood road on top spur, bears E. and W.
- Descend over nearly N. slope into N. fork of Ephraim Canyon or locally called New Canyon.
- 39.84 Proportionate measurement and a northing of 39.83 chs., Set an iron post, 3 ft. long 3 ins. in dia., 24 ins. in the ground for cor. of secs. 12 and 13 on the E. bdy. of T.17 S., R.3 E., with brass cap marked
- | | | |
|-------|--------|--------|
| | T 17 S | |
| R 3 E | S 12' | |
| | S 13' | R.4 E. |
- 1913
- raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
- Land, rough mountainous with a general W. exposure.
- Soil, gravelly, rocky, decayed vegetation and some

"35"
133

Re-survey of the west boundary of T.17 S., R.4 E.

chains.

adobe clay , on hard , moist clay and rock sub-soil. ;
3 rd. rate.

Timber scattering scrub cedar and pinon.

Undergrowth , dense oak , buck and service brush.

Some good grass for grazing purposes.

Land mountainous , heavily timbered or covered with
dense undergrowth , 39.84 chs.

N.1°18'W. , re-surveying on the E. bdy. of sec. 12

Over rough mountainous land sloping NW. into N. fork
of Ephraim Canyon. , through scattering forest of scrub
cedar and pinon and undergrowth of oak , service , choke
cherry and chaparral.

Descend

2.75 Bottom of N. fork of Ephraim Canyon , and wash , 50 lks.
wide , 15 ft. deep . 50 ft. below sec. cor. , course SW.
Channel of wash is dry , the water being taken out about
15 chs. NE. for power purposes.

Begin steep ascent of SE. face of mountain.

5.00 Wagon road , bears N.20°E. and S.20°W.

6.00 Wash , 20 lks. wide , 10 ft. deep , course SW.

39.84 Proportionate measurement and a northing of 39.83 chs.

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins.
in the ground for $\frac{1}{4}$ sec. cor. on the E. bdy of sec.
12 , T.17 S. , R. 3 E. , with brass cap marked

S 12
 $\frac{1}{4}$

1913

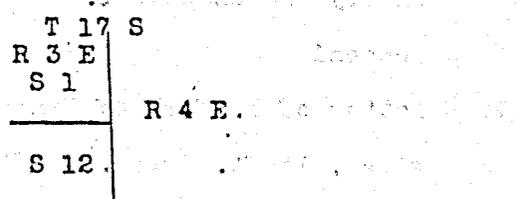
raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , W.
of cor.

41.00 Top of steep ascent , 500 ft. above canyon , bears
NE. and SW. , enter dense sagebrush undergrowth , thence
gradually ascend

Re-survey of the west boundary of T.17 S., R.4 E

chains

- 52.00 Top of high mountain ridge , bears NE. and SW.
Leave cedar and pinon timber.
Thence descend along NW. slope.
- 58.00 Top of steep descent , bears E. and W.
Descend abruptly.
- 60.00 Hollow , 50 ft. deep , drains W.
Ascend SW. slope of spur.
- 73.00 Wire fence , bears E. and W.
- 77.00 Top of spur , 50 ft. above hollow , bears E. and W
Descend over NW. slope.
- 79.68 Proportionate measurement and a northing of 79.66 chs.
Set an iron post , 3 ft. long , 3 ins. in dia. , 24 ins.
in the ground for cor. of secs. 1 and 12 on the E. bdy.
of T.17 S. , R.3E. , with brass capmarked



1913

raise a mound of stone , 2 ft. base , 1 1/2 ft. high , W. of cor.

Land rough mountainous with a general W. drainage , and with steep NW. and SE. slopes of ridges draining NW. and SE. to N. fork of Ephraim Creek on S. 52.00 chs. , and W. to San Pete Valley on N. 27.68 chs.

Soil, gravelly , rocky , decayed vegetation and adobe clay on a hard clay , shale , rocky and decayed vegetation sub-soil ; 3 rd. rate.

Timber , scrub cedar and pinon on S. 52.00 chs.

Undergrowth , dense oak , choke cherry , service , chaparral and sage brush.

Some good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth , 79.68 chs.

October 3 : At this sec. cor. , I set off 3° 56' S. , on the decl. arc; and at 11h 49m a.m.l.m.t. , observe the sun

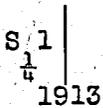
Resurvey of the West Boundary of T.17 S., R.4 E.

Chains.

on the meridian; the resulting lat. is 39°22'.

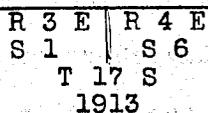
N.1°18'W. resurveying on the E. bdy. of sec. 1
 Over rough mountainous land, with a general W. drain;
 through scattering forest of scrub cedar and pinon
 and undergrowth of oak, sage, service, and chaparral.
 Descend over NW. slope of ridge.

- 7.00 Gulch, 60 ft. deep, drains NW. Ascend 50 ft. to
- 12.00 Top of ridge, bears E. and W. Gradually descend.
- 19.00 Bottom of hollow and wash, 10 lks. wide, 4 ft. deep, drains
 NW. Thence over west face of mountain ridge, gradually
 descending.
- 39.84 Proportionate measurement and a northing of 39.83 chs.
 Set an iron post 3 ft. long, 1 in. in dia., 24 ins. in the
 ground, for $\frac{1}{4}$ sec. cor. on the E. bdy. of sec. 1, T. 17 S., R.
 3 E., with brass cap marked



raise a mound of stone 2 ft. base, 1½ ft. high W. of cor.

- 68.50 Bottom of hollow and wash, 50 lks. wide, 15 ft. deep,
 drains NW. Ascend.
- 73.00 Top of low ridge, bears NW. and SE. Gradually descend,
 over N. slope.
- 79.68 Proportionate measurement, and a northing of 79.68 chs.
 The cor. of Tps. 16 and 17 S., Rs. 3 and 4 E., heretofore
 described. I destroy all traces of the old cor.; and
 at the same point, (Knowing that a closing Tp. cor. will
 be necessary for Tp. 16 S., Rs. 3 and 4 E.), I establish
 a corner for T. 17 S., Rs. 3 and 4 E. only,
 Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in
 the ground, for cor. of T. 17 S., Rs. 3 and 4 E., with
 brass cap marked T 16 S R 4 E



from which

Resurvey of the West Boundary of T.17 S., R.4 E.

A cedar, 8 ins.diam., bears S.8½°E. 40 lks.dist.
marked T 17 S R 4 E S 6 B T

and raise a mound of stone 2 ft.base, 1½ ft.high S.of
cor.No tree within limits in sec.1, T.17 S.R.3 E.
Land, rough, mountainous; with a general West exposure.
Soil, gravelly, rocky, decayed vegetation and adobe
clay, on hard, moist clay and gravelly subsoil;3d
rate.

Timber, scrub cedar and pinon.

Undergrowth, dense oak, sage, service and chaparral.

Good grass for grazing purposes.

Land, mountainous, heavily timbered or covered with
dense undergrowth 79.68 chs.

October 3, 1913. *Thos. C.*

U.S.Transitman.

General Description.

This township, which lies in the Manti National Forest Reserve, contains rough and mountainous land, the east two ranges of sections lying on the summit of a spur of the Wasatch Mountains, consist of broken rolling mountain top;while the remaining part is situated on the west slope of the divide, and is very rough and rugged. The elevation of this township ranges from 6000 ft.to 13,000 ft., the highest part being situated in secs.1 and 2, and is commonly called "The Horse Shoe". The divide of this mountain, which extends through the township, in a north and south direction, in sections 3, 11 14, 23, 26, and 35, forms a watershed for San Pete Valley to the west and Joe's Valley, which drains into Castle Valley to the east. From this divide, the height of which ranges from 11000, to 12000 ft.above sea level, and is generally above timber line, the country slopes off gently to the east in the form of high flat ridges

cut by several canyons which head at the divide., while the country to the west breaks off abruptly and slopes west to the valley.

The soil is generally a rich mountain soil caused by the decaying of the abundant growth of vegetation. Under this layer of decayed vegetation is about 6 or 8 ins. of rich black loam mixed with gravel , and is ver hard and moist , this being due to the unusual amount of rainfall which this country is subject to. In many places throughout the township and especially on top of the ridges and the divide the soil is very poor , consisting chiefly of rocks., of limestone formation.

Valuable forests of spruce , balsam fir , pine and aspen timber is found throughout the township and especially on the slopes of the canyons. Aspen timber predominates in the western half of the township , while in the eastern part more spruce , balsam fir and pine is found. A very dense and rank undergrowth of chaparral , service , choke cherry , buck , sage , oak , maple , hawthorne and many rich mountain grasses covers the entire township. The heaviest growth is found in the canyons.

This township is used considerably for the grazing of sheep and cattle during the summer months and affords excellent feed for the reason that the land lies on a forest reserve and can only be used for grazing purposes a few months each year.

The township is well watered by many clear , pure mountain streams . Ephraim creek and it's tributaries , willow creek , and branches of Manti creek drain the western part while Cottonwood creek and it's tributaries drain the eastern part.

Reservoirs are situated in secs. 35 and 36 for the purposes of storing surplus water and using it in the summer when the water in the creeks are low. Practically

all the water in this township is used for irrigation purposes in the valleys to the west and east. A ditch is built through secs. 1, 2, 3, 4, 5 and 11 to carry surplus water into San Pete Valley for irrigation.

A saw mill is situated in sec 23, but is only run in the summer months.

The United States Government has established an experiment station in secs. 20 and 21 for the purpose of testing soil, measuring the amount of snow and rain fall and to determine the general capability of the land. Considerable experiment work is being done in secs. 20 and 26, although work on a smaller scale is being conducted in other parts of the township.

Frank's, a Government forest ranger's cabin is situated in sec. 25. Abandoned log cabins, owners names unknown are situated in secs. 19, 23 and 30.

No trace of mineral was discovered during the survey of this township.

Howard W. Miller

U. S. Surveyor.

Thos. C. Rathbun

U. S. Transitman.

BOOK A-409
FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191 _____, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

For final oath of Howard W. Miller, U.S. Surveyor, see book "H"
T. 18 S., R. 3 E.

For final oath of Thos. C. Rathbone, U.S. Transitman, see book "E"
T. 16 S., R. 3 E.

_____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191 _____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Salt Lake City, Utah, October 28, 191 5.

The foregoing field notes of the survey of the subdivisional lines and resurvey of the west boundary of Township No. 17 South, Range No. 4 East, of the Salt Lake Base and Meridian, Utah, _____

executed by Howard W. Miller and Thomas C. Rathbone _____
under special instructions dated July 19 _____, 191 3, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the resurveys and surveys they describe, are hereby approved.

W. H. Thoresen
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

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BOOK A.409
G.

FIELD NOTES

OF THE SURVEY OF THE

RETRACEMENT AND RESURVEY OF THE SOUTH BOUNDARY,

AND

RETRACEMENT, RESURVEY, AND SURVEY OF THE SUBDIVISION

OF

TOWNSHIP NO.13 SOUTH, RANGE NO.7 EAST,

AND

RESURVEY OF THE WEST BOUNDARY

OF

TOWNSHIP NO.13 SOUTH, RANGE NO.8 EAST

Of the SALT LAKE BASE AND Meridian,

in the State of U T A H

EXECUTED BY

ROBERT E.L. COLLIER, GEORGE C. SWAN, AND HOWARD W. MILLER

U.S. Transitmen and
in the capacity of U.S. Surveyor, under instructions dated May 23, 1911,
and Supplemental Special Instructions dated July 22, 1911, and Aug. 31, 1914,
issued by the United States Surveyor General to govern surveys included in
Group No. 13, which were approved by the Commissioner of the General Land
Sept. 8, 1911, and Sept. 12, 1914 respectively
office, July 3, 1911, ~~1911~~, pursuant to authority contained in the Act of
Congress dated 1911

Survey commenced September 6, 1911

Survey completed December 7, 1914

INDEX DIAGRAM.

Township -----, Range -----

6	5	4	3	2	1
7	8	9	10	11	12
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19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Retracement of the Subdivision of Township 13 South, Range 7 East.

Chains. Survey executed with a Burt's Solar Compass manufac - tured by W. & L. E. Gurley, the horizontal limb having two double verniers placed opposite to each other, and reading to single minutes of arc.

Believing from recent tests that my instrument is in adjustment, I omit the test at this time.

Preliminary to commencing the subdivision of this township I make the following retracements:

September 6, 1911: At the cor. of secs. 3, 4, 33, and 34, on the N. bdy. of this township, which is a sandstone 14 x 6 x 14 ins. above ground, marked as described by the surveyor-general. No bearing trees are to be found, I therefore mark new bearing trees as follows:

An aspen 8 ins. dia. bears N. 80° 20' E. 152 lks. dist. marked T 12 S R 7 E S 34 B T

An aspen 4 ins. dia. bears S. 20° 50' W. 148 lks. dist. marked T 13 S R 7 E S 4 B T

An aspen 12 ins. dia. bears S. 14° 30' E. 147 lks. dist. marked T 13 S R 7 E S 3 B T

Sept. 6; 1911:

At 9h a.m. l.m.t., I set off 39° 43.5' on the lat. arc; 6° 43' N. on the decl. arc; and determine a meridian with the solar at the above described corner.

Thence I run S. 0° 27' W. retracing bet. secs. 3 and 4, Descending along E. slope of ridge.

1.50 Enter scattering aspen and choke cherry.

19.00 Trail bears E. and W.

21.90 Bottom of ravine, 212 ft. below sec. cor., drains E.

Ascend through heavy aspen and dense choke cherry, bearing with ravine.

39.31 Fall 6 lks. W. of the 1/4 sec. cor., which is a sandstone 12 x 12 x 3 ins. above ground, marked and witnessed as described by the surveyor-general. I destroy this corner, and in its place

Set an iron post, 3 ft. long, 1 in. dia., 26 ins. in the

Retracement of the Subdivision of Township 13 South, Range 7

Chains.

ground, for re-established $\frac{1}{4}$ sec.cor., marked on brass cap $\frac{1}{4}$ S 4 on the W.half, and S 3 on E.half; from which

An aspen 5 ins.dia., bears N.47° 45'W.3.5 lks. dist., marked $\frac{1}{4}$ S 4 B T

An aspen 5 ins.dia.bears S.76°50'E. 13.5 lks. dist., marked $\frac{1}{4}$ S 3 B T

Sept.6: At this cor.I set off 6° 40'N.on the decl.arc; and at 12h 0 m.l.m.t., observe the sun on the meridian the resulting lat.is 39°43'; which is within 1' of the proper lat.

The above described $\frac{1}{4}$ sec.cor.is on the east slope of a ridge, near the top, and is 230 ft.above the bottom of the ravine.

Descend through heavy aspen and dense choke cherry.

50.81 Leave aspen and choke cherry, bearing E.and W.

53.31 Spur projects S.65° E., 50.ft.below $\frac{1}{4}$ sec.cor.

57.30 Enter heavy aspen bearing W. and S.75° E.

58.40 Bottom of ravine, 170.ft.below $\frac{1}{4}$ sec.cor., course S.60° E. Ascend.

79.32 Fall 5 lks.W.of the cor.of secs.3,4,9, and 10, which is a sandstone 3 x 12 x 6 ins.above ground, marked and witnessed as described by the surveyor-general. I destroy this cor., and re-establish it in the same place as follows:

Set an iron post 3 ft.long, 2 ins.in dia., 24 ins.in the ground, for cor.of secs.3,4,9, and 10, with brass cap marked

T.13 S S 4 in NW.

R 7 E S 3 in NE.

S 10 in SE.; and

S 9 in SW.quadrant; from which

An aspen 4 ins.dia.bears N.23° 03'W.23 lks.dist. marked T 13 S R 7 E S 4 B T

An aspen 3 ins.dia.bears N.49°14'E.25 lks.dist. marked T 13 S R 7 E S 3 B T

Retracement of the Subdivision of Township 13 South, Range 7 East.

Chains

An aspen 4 ins.dia.bears S.56° 20'E.11.5 lks.
dist., marked T 13 S R 7 E S 10 B T

An aspen 4 ins.dia.bears S.19° 50'W.8 lks.dist.
marked T 13 S R 7 F S 9 B T

The course of the north half mile is S.0° 21'W.39.31 chs.
and the south half mile S.0°23'W.40.01 chs.

The above sec.cor.is 67 ft.above bottom of ravine.

Land, mountainous.

Soil, sandy loam and stony; 2d and 3d rates.

Timber, aspen; undergrowth choke cherry.

This line runs along a steep broken east slope. About 20
chs.east is a canyon in the bottom of which is a small
stream of water. From the bottom of the canyon the
land rises with a long steep ascent to the east. The
west side of the canyon is covered with a heavy growth
of aspen and choke cherry over the greater portion.The
east side has scattering bunches of aspen and a heavy
growth of sagebrush. Both slopes are too steep for cul-
tivation; but afford excellent grazing ground.

South, retracing bet.secs.9 and 10,

Ascending through heavy aspen and dense willow.

3.50 Leave willow; enter dense choke cherry undergrowth,bears
N.60° W. and S.60° E.

5.50 Top of spur, 84 ft.above sec.cor., projects S.80° E.
Leave aspen and choke cherry, bearing with spur.
Descend.

20.90 Bottom of ravine 395 ft.deep, drains N.50° E.
Ascend.

Sept.6, 1911.

Sept.7, 1911:

31.00 Top of spur, 209 ft.above bottom of ravine, projects N.
55°E.for 5 chs.; then gradually turns to N.
Descend.

Retracement of the Subdivision of Township 13 South, Range 7 E

Chains.
39.93

Fall 2 lks.W.of the $\frac{1}{4}$ sec.cor., which is a sandstone 14 x 7 x 10 ins.above ground, marked as described by the surveyor-general. I remove the stone, and in its place Set an iron post 3 ft.long, 1 in.diam., 36 ins.in the ground for $\frac{1}{4}$ sec.cor., marked on brass cap $\frac{1}{4}$ S 9 on W. half, and S 10 on E.half; from which

An aspen 6 ins.diam.bears S.85°05'E.70 lks.dist.

marked $\frac{1}{4}$ S 10 B T

An aspen 6 ins.dia.bears S.23° 55'W.145 lks.dist.

marked $\frac{1}{4}$ S 9 B T

Sept.7: At this cor.I set off 39° 42' on the lat.arc,6° 19.5' N.on the decl.arc; and at 10h a.m.l.m.t., determine a meridian with the solar.

Ascend. Enter aspen and choke cherry, bears W.and N.50° E.

55.98 Descend along E.slope.

60.43 Leave aspen, bears N.30° E. and S.30° W.

63.63 Trail bears NW. and S.30° E.

64.73 Draw drains N.80° E. Enter aspen, bears with draw.

Ascend.

78.33 Leave aspen bears N.60° E.and S.60° W.

79.92 The cor.of secs.9,10,15, and 16, which is a sandstone 12 x 7 x 10 ins.above ground,marked as described by the surveyor-general. I destroy this corner, and in its place

Set an iron post 3 ft.long, 2 ins.dia., 24 ins.in the ground, for cor.of secs.9,10,15, and 16, with brass cap marked

T 13 S S 9 in NW.

R 7 E S 10 in NE

S 15 in SE.; and

S 16 in SW quadrants; from which

An aspen 5 ins.dia.bears N.29° 20'W.114 lks.dist.

marked T 13 S R 7 E S 9 B T

Retracement of the Subdivision of Township 13 South, Range 7 East.

Chains.

An aspen 5 ins. dia. bears N. 38° 10' E. 275 lks. dist.

marked T 13 S R 7 E S 10 B T

An aspen 6 ins. diam. bears S. 67° 26' E. 364 lks. dist.

marked T 13 S R 7 E S 15 B T

An aspen 7 ins. diam. bears S. 29° 40' W. 280 lks. dist.

marked T 13 S R 7 E S 16 B T

The course of the north half-mile is S. 0° 01' E. 39.93 chs. and the south half-mile south 39.99 chs.

Land, mountainous.

Soil, sandy and stony; 2d and 3d rates.

Timber, aspen; undergrowth choke cherry and willow.

This line runs along a steep east slope of a ridge. The slope is broken by numerous draws and ravines which drain into a canyon lying about 20 chs. E. of the line. The slope is covered with a heavy growth of aspen and choke cherry, except for occasional open spaces and patches of sagebrush. The canyon mentioned above is quite narrow; and the land beyond is steep and quite heavily timbered. These slopes are too steep for cultivation; but afford good pasturage.

Sept. 7: At the cor. of secs. 9, 10, 15, and 16 I set off 6° 16' N. on the decl. arc; and at 11h 58m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is 39° 42' or within 1' of the proper lat.

South, retracing bet. secs. 15 and 16,

Along broken E. slope.

2.40 Enter aspen, bearing N. 80° E. and S. 80° W.

6.65 Trail bears S. 40° E. and N. 40° W.

15.75 Leave aspen, bearing N. 82° E. and S. 60° W.

19.00 Enter aspen, bearing N. 82° E. and S. 82° W.

27.20 Leave aspen, bearing SE. and SW.

36.30 Enter aspen bearing NE. and NW.

40.15 Fall 3 lks. W. of the 1/4 sec. cor., which is a sandstone 7 x

Retracement of the Subdivision of Township 13 South, Range 7 East

Chains

5 x 10 ins. above ground, marked as described by the surveyor-general. I destroy this corner and in its place,

Set an iron post 3 ft. long, 1 ins. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 16 on W. half, S 15 on E. half; from which

An aspen 8 ins. dia. bears N. 13° 25' W. 240 lks. dist. marked $\frac{1}{4}$ S 16 B T.

An aspen 10 ins. dia. bears S. 84° 20' E. 101 lks. dist. marked $\frac{1}{4}$ S 15 B T.

This cor. is on the E. slope of a ridge, and is 89 ft. above sec. cor. to the north.

Ascend along E. slope.

49.65 Top of ridge, 18 ft. above $\frac{1}{4}$ sec. cor., bears S. 15° E. and N. 15° W. Descend.

50.82 Trail bears S. 20° E. and N. 10° W.

52.00 Leave heavy aspen; enter scattering aspen bears N. 30° E. and NW.

56.55 Leave scattering aspen.

58.25 Wagon road, bears N. 50° W. and S. 50° E.

80.14 Fall 2 lks. W. of cor. of secs. 15, 16, 21 and 22, which is a sandstone 9 x 9 x 9 ins. above ground, marked as described by the surveyor general. I destroy the old corner, and in its place

I set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 15, 16, 21, and 22, with brass cap, marked

T 13 S S 16 in NW.

R 7 E S 15 in NE.

S 22 in SE.; and

S 21 in SW. quadrant; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Pits impracticable.

The course of the north half-mile is S. 0° 01' E. 40.15 chs., and the south half-mile S. 0° 01' E. 39.99 chs.

Retracement of the Subdivision of Township 13 South, Range 7 East.

Chains.

The sec.cor.comes on a steep side hill.460 ft.below the top of the ridge.

Land, mountainous.

Soil, sandy and stony; 2d and 4th rate.

Timber, aspen; undergrowth choke cherry, sagebrush and elder.

There is no land in this mile fit for cultivation, as it is all steep; and that on the south of the ridge is very rocky. There is no water except a small spring in the northern part of sec.15.

South, retracing bet.secs.21 and 22,

Descending.

0.97 Old road, bears E.and W.

3.09 Bottom of a branch of Pleasant Valley Canyon, 50 ft.below sec.cor., bears N.80° W. Enter aspen bearing with canyon. Ascend.

19.25 Leave aspen, bearing NW. and SE.

23.00 Top of spur, 364 ft.above sec.cor., projects N.85° W. Descend along broken side hill sloping to the west.

September 7, 1911.

Sept.8:

34.90 Enter heavy aspen, bearing E.and W.

39.92 Fall 6 lks.W.of the $\frac{1}{4}$ sec.cor., which is a sandstone 12 x 4 x 16 ins.above ground, marked as described by the surveyor general. I destroy this corner and in its place,

Set an iron post 3 ft.long, 1 in.in dia., 26 ins.in the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap $\frac{1}{4}$ S 21 on W.half, S 22 on E.half; from which

An aspen 6 ins.dia.bears S.63° 40'W.30 lks.dist.

marked $\frac{1}{4}$ S 21 B T

An aspen 4 ins.dia.bears S.69° E.16 lks.dist.

marked $\frac{1}{4}$ S 22 B T

Retracement of the Subdivision of Township 13 South, Range 7 East

Chains.

This cor. is 78 ft. below the top of the spur.

Ascend.

42.12

Leave aspen, bears N.80° E. and S.80° W.

44.42

Top of spur, 55 ft. above $\frac{1}{4}$ sec. cor., projects W.

September 8th: At this point I set off 39° 40.5' on lat. arc; 5° 58' N/ on decl. arc; and at 9h a.m. l.m.t., determine a meridian with the solar.

Descend.

59.32

Bottom of a ravine, 280 ft. deep, with spring branch 3 lks. wide in bottom, course N.40° W.

Enter pine and aspen, bearing with ravine.

Ascend.

66.12

Drag road bears N.40° W. and S.40° E.

79.86

Fall 3 lks. E. of sec. cor., which is a sandstone 13 x 5 x 9 ins. above ground, marked and witnessed as described

by the surveyor-general. I destroy this corner, and in its place

Set an iron post 3 ft. long, 2 ins. in dia.; 24 ins. in the ground, for the cor. of secs. 21, 22, 27, and 28, with brass cap marked

T 13 S S 21 in NW.

R 7 E S 22 in NE.

S 27 in SE.; and

S. 28 in SW. quadrants; from which

An aspen 8 ins. dia. bears N.20° 52' W. 76 lks. dist.

marked T 13 S R 7 E S 21 B T

An aspen 7 ins. dia. bears N.30° 30' E. 90 lks. dist.

marked T 13 S R 7 E S 22 B T

An aspen 5 ins. dia. bears S.48° 15' E. 76 lks. dist.

marked T 13 S R 7 E S 27 B T

An aspen 5 ins. dia. bears S.43° W. 20 lks. dist.

marked T 13 S R 7 E S 28 B T

The course of this line is, N. half S. 0° 06' E. 39.92 chs. and S. half S. 0° 08' W. 39.94 chs.

This corner sets on the north slope of a spur, 380 ft.

Retracement of the Subdivision of Township 13 South, Range 7 East.

Chains.

above the bottom of the ravine.

Land, mountainous.

Soil, sandy loam and stony; 2d and 3d rates.

Timber, aspen and pine; undergrowth sagebrush.

This line runs along the west side of the ridge separating Pleasant Valley and Gordon Creek. The land slopes to the west, and is very broken, being cut by numerous canyons and ravines; and having many projecting spurs extending west to the Pleasant Valley Canyon. The slopes are quite heavily timbered with aspen and pine, from which a great many ties have been cut, and the coal mines are now cutting their mine timbers. The open spaces are covered with a heavy growth of short sagebrush; and all the land affords good grazing. Near the top of the spurs the sandstone is close to the surface, and the soil is very stony; but lower down the slopes are covered with a good grade of fertile soil. The land is too steep and broken for cultivation.

Sept. 8: At this cor. I set off 5° 55' N. on the decl. arc; and at 11h 58m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is 39° 40'

South retracing bet. secs. 27 and 28,

40.00

Find no trace of $\frac{1}{4}$ sec. cor. Set temp. $\frac{1}{4}$ sec. cor.

79.98

Fall 8 lks. E. of the cor. of secs. 27, 28, 33, and 34, which is a sandstone 10 x 4 x 12 ins. above ground, marked and witnessed as described by the surveyor general. The course of this line is therefore S. 0° 03' W., and the distance 79.98 chs.

I return to the cor. of secs. 21, 22, 27, and 28, and run S. 0° 03' W. on resurvey line bet. secs. 27 and 28, ascending through heavy aspen.

13.30

Top of spur, 256 ft. above sec. cor., projects N. 40° W.

Retracement of the Subdivision of Township 13 South Range 7 East

Chains.	Descend.
13.40	Trail, bears N.40° W. and S.40° E. Enter choke-cherry, bears with trail.
23.10	Bottom of hollow, 110 ft. deep, bears N.75° W. Enter scattering pine.
33.60	Ascend; leave choke cherry, bearing with hollow.
37.50	Leave aspen and pine, bears E. and W.
39.99	Top of spur, 246 ft. above bottom of hollow, bears E. and W. Descend.
39.99	Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for re-established $\frac{1}{4}$ sec. cor., with brass cap marked $\frac{1}{4}$ S 28 on W. half, and S 27 on E. half; raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
46.38	Trail bears N.40° W. and S.40° E.
52.00	Enter scattering bunches of aspen.
57.88	Enter heavy aspen bears N.60° E. and S.60° W.
61.78	Bottom of canyon 414 ft. deep, drains N.80° W. Ascend.
61.80	Enter pines bearing E. and W.
63.68	Drag road bears N.55° W. and S.55° E.
74.10	Top of spur, 168 ft. above bottom of canyon, bears E. and W. Descend.
74.33	Trail, bears same as spur.
79.98	The cor. of secs. 27, 28, 33, and 34, which I destroy, and in its place
	Set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for re-established cor. of secs. 27, 28, 33, and 34, with brass cap marked
	T 13 S S 28 in NW.
	R 7 E S 27 in NE.
	S 34 in SE.; and
	S 33 in SW. quadrant; from which
	An aspen, 8 ins. dia. bears E. 83° 40' W. 208 lks. dist.
	marked T 13 S R 7 E S 33 B T
	An aspen 6 ins. dia. bears N. 31° 65' E. 165 lks. dist.

Retracement of the Subdivision of Township 13 S., Range 7 East.

Chains.

marked T 13 S R 7 E S 27 B T

An aspen 6 ins.dia.bears N.52°E.14 lks.dist.

marked T 13 S R 7 E S 27 B T

An aspen 6 ins.dia.bears S.34° 56'E.56 lks.dist.

marked T 13 S R 7 E S 34 B T

An aspen 6 ins.dia.bears N.61°W.417 lks.dist.

marked T 13 S R 7 E S 28 B T

An aspen 7 ins.dia.bears S.33° 30'W.175 lks.dist.

marked T 13 S R 7 E S 33 B T

This cor.is 110 ft.below the top of the spur.

Land, mountainous.

Timber, aspen and pine; undergrowth choke-cherry.

Soil, sandy loam and stony; 2d and 3d rate.

The land in this mile. is all too steep for cultivation.

The soil on the north slopes of spurs is a sandy loam; while on the south slopes the soil is quite stony. The land is quite heavily timbered; and in the open spaces there is a heavy growth of sagebrush. Grass grows luxuriantly and affords good grazing.

There are indications of coal, though no definite veins were encountered on this line.

South on retracement line bet.secs.33 and 34

40.00 Make diligent search, but find no trace of $\frac{1}{4}$ sec.cor., nor of the bearing trees. Considerable timber has been and is being cut in this vicinity, and corner has no doubt been destroyed in getting the timber cut.

I continue my line south, and at

79.68 Fall 10. lks.E.of the cor.of secs.3,4,33, and 34, on S. bdy.cf township, which is a sandstone 6 x 7 x 6 ins. above ground, marked and witnessed as described by the surveyor-general.. Part of the bearing trees are dead, and the markings on others not easily distinguished.

The course of this line is therefore S.0° 04'W. and

Retracement and Resurvey of the Subdivision of T.13 S., R.7 E.

Chains.

the distance 79.68 chs. September 8, 1911.

I return to the cor. of secs. 27, 28, 33, and 34, and resurvey this line as follows:

Sept. 9, 1911: At this cor. I set off 5° 37' N. on the decl. arc, 39° 39' on the lat. arc; and determine a meridian with the solar, at 8h 0m a.m. l.m.t.

Thence I run S. 0° 04' W. on resurvey line bet. secs. 33 and 34,

Descending through aspen timber.

- 5.00 Old road bears N. 70° E. and S. 70° W.
- 7.20 Bottom of ravine, 148 ft. below sec. cor., drains S. 70° W. Ascend.
- 14.70 Leave aspen, bears E. and W.
- 18.80 Enter scattering aspen, bears E. and W.
- 19.10 Trail 73 ft. above bottom of hollow, bears S. 70° W. and N. 70° E.

Thence along broken W. slope of ridge.

- 25.40 Bottom of hollow, 136 ft. deep, bears N. 85° W. Enter burnt and fallen timber, bearing with hollow. Ascend.

- 27.06 Wagon road, bears E. and S. 78° W.
- 30.50 Enter heavy pine and scattering aspen, bearing E. and W.
- 36.40 Drag road bears N. 85° W. and S. 85° E.

- 39.64 Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for re-established 1/4 sec. cor., with brass cap marked 1/4 S 33 on W. half, S 34 on E. half; from which
 - A balsam 8 ins. dia. bears S. 46° 30' W. 52 lks. dist. marked 1/4 S 33 B T
 - A balsam 15 ins. dia. bears S. 31° E. 57 lks. dist. marked 1/4 S 34 B T

September 9, 1911: At this cor. I set off 5° 33' N. on the decl. arc; and at 11h 57m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is 39° 38.5'

- 40.08 A balsam, 24 in. diam., on line, I mark it with 2 notches

Retracement and Resurvey of the Subdivision of T.13 S., R.7 E.

Chains.

on N. and S. sides.

43.75 Trail bears E. and W.

52.35 Trail bears SE. and NW.

59.00 Old sheep corral 20 lks. E. of line.

59.80 Leave timber, bears E. and W.

Descend rapidly.

73.80 Enter scattering bunches of aspen.

78.20 Enter heavy aspen and pine timber, bearing S. 65° E. and N. 65° W.

79.68 The old cor. of secs. 3, 4, 33, and 34, which I destroy, and in its place,

Set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for re-established corner of secs. 3, 4, 33, and 34, marked on brass cap

T 13 S S 33 in NW.

R 7 E S 34 in NE.

R 7 E S 3 in SE.; and

T 14 S S 4 in SW quadrants; from which

An aspen 10 ins. dia. bears N. 7° 30' W. 20.5 lks. dist.

marked T 13 S R 7 E S 33 B. T

An aspen 6 ins. dia., bears N. 82° 20' E. 48 lks.

dist., marked T 13 S R 7 E S 34 B. T

A balsam 6 ins. dia. bears S. 45° 20' E. 59 lks. dist.

marked T 14 S R 7 E S 3 B. T

A balsam 16 ins. dia., bears S. 46° 30' W. 39 lks.

dist., marked T 14 S R 7 E S 4 B. T

Land, mountainous.

Soil, sandy and stony; 2nd and 3d rate.

Timber, aspen and pine.

The land in this mile is all mountainous and steep. The slopes are quite heavily timbered with aspen and pine,

which is being cut for mining timbers. The land is too steep for cultivation; but grass grows luxuriantly,

and affords good grazing. There is considerable water

in the canyons west of the line. The soil is quite

Retracement of the South Boundary of Township 13 S. Range 7 East.

Chains.

stony on the south slopes; but on the north slopes there is a deep sandy loam. There are numerous indications of coal. No veins of commercial value were encountered on our line however.

Retracement South Boundary T. 13 S., R. 7 E.

Sept. 9, 1911:

- From the re-established cor. of secs. 3, 4, 33, and 34 on the S. bdy. of the township I run
- East on a retracement line along the S. bdy. of sec. 34,
- Ascending through heavy timber, aspen.
- 2.90 Telephone Company's trail bears S. 45° E.
- 7.80 Leave aspen, bears S. and N. 25° E.
- 12.00 Top of ridge, 193 ft. above cor., bears N. and S. Descend/
- 13.40 Enter heavy aspen, bears N. and S. Descend abruptly.
- 28.10 Wash, 30 lks. wide, 12 ft. deep, drains S. 62° E.
- 30.02 Sandstone ledge, 12 ft. high, bears NE. and SW.
- 33.30 Small spring near line, drains S.
- 34.90 Spring branch, 2 lks. wide, 6 ins. deep, in bottom of canyon, 500 ft. below top of ridge, runs 25 lks. E. along line, and turns N. 75° E.
- 35.40 Enter heavy pines bearing W. and N. 60° E. Descend along broken S. side of canyon.
- 39.92 At a point 568 ft. below top of ridge, fall 8 lks. S. of the $\frac{1}{4}$ sec. cor., which is a sandstone 12 x 9 x 7 ins. above ground, marked as described by the surveyor-general. I destroy this corner, and in its place Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for re-established $\frac{1}{4}$ sec. cor., with brass cap marked $\frac{1}{4}$ S 34 on N. half, S 3 on S. half; from which A balsam, 8 ins. dia., bears N. 36° 15' E. 20 lks.

Retracement of the South Boundary of Township 13 S., Range 7 East.

Chains.

dist., marked $\frac{1}{4}$ S 34 B T

An aspen 5 ins.dia., bears S.12° 30'W.18 lks.dist.

marked $\frac{1}{4}$ S 3 B T

The course of this line is N.89°53'E. 39.92 chs.

September 9, 1911.

September 11, 1911:

From the re-established $\frac{1}{4}$ sec.cor. I continue my line

East on retracement line along the S.bdy.of sec.34,

counting distances from the $\frac{1}{4}$ sec.cor.

Descend along the broken S.side of canyon; through heavy pine timber.

4.80 Wash, 8 lks.wide, 3 ft.deep, course N.

9.00 Balsam 12 ins.diam.on line, marked with 2 notches on E. and W.sides.

18.50 Leave pines; enter aspen and dense undergrowth, bears N. and S.

26.95 Bottom of hollow, 195 ft.below $\frac{1}{4}$ sec.cor., drains N.48°E. Maple and willow in bottom. Leave aspen and undergrowth, bears with hollow.

29.00 Begin descent.

34.80 Stream 4 lks.wide, 1 ft.deep, in bottom of canyon, 400 ft.below $\frac{1}{4}$ sec.cor., course S.65° E.

Leave pines; enter dense oak and serviceberry brush, bearing with canyon. Ascend.

40.00 A point 110 ft.above bottom of canyon. I search diligently for sec.cor., but can find no trace of it.

Sept.11: At this point I set off 4° 50'N.on the decl.arc; 39° 38.5' on the lat.arc; and at 9h 15m a.m.l.m.t., determine a meridian with my solar.

Note: Transitman Collier having run the eastern 2 miles of this line, and found the length to be 159.35 chs.to this point, which gives a total length for the 2 $\frac{1}{2}$ miles of 199.35 chs., which is within limits; I therefore divide this distance proportionately; and at

39.87 On my line I re-establish the cor.of secs.2,3,34, and 35 as follows:

Retracement of the South Boundary of Township 13 S., Range 7

Chains.

Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for re-established cor. of secs. 2, 3, 34, and 35 with brass cap marked

T 13 S S 34 in NW.

R 7 E S 35 in NE.

R 7 E S 2 in SE.; and

T 14 S S 3 in SW. quadrant; from which

A balsam 6 ins. diam., bears S. 76° E. 88 lks. dist. marked T 14 S R 7 E S 2 B T

A balsam 16 ins. dia., bears S. 53° W. 195 lks. dist. marked T 14 S R 7 E S 3 B T

An oak 2 ins. diam., bears N. 86° 50' E. 96 lks. dist. marked T 13 S R 7 E S 35 B T

No other bearing trees within limits; raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of cor.

Land, mountainous.

Soil, stony; 3d and 4th rate.

Timber, pine and aspen. Undergrowth oak, serviceberry and willow.

The land along this mile is too steep for cultivation, especially on the east side of the ridge. The sandstone is close to the surface, and outcrops at frequent intervals. Grazing is fair. There are numerous indications of coal, but only in the bottom of the canyon are there any seams exposed; and of these only one which is exposed close to the point where the line crosses the main canyon, appeared to be of commercial value.

September 11, 1911.

George C. Swan
U.S. Transitman.

Retracement and Resurvey of South Boundary T.13 S., R.7 E.

Survey executed with a Young & Sons transit, No. 4817, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at Salt Lake City, Utah, found correct, and approved by the surveyor-general for Utah June 3, 1911.

August 26, 1911: I examined the adjustments of the instrument, and find them correct; then, to test the solar apparatus by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on

Polaris, I proceed as follows:

At my camp in the NW $\frac{1}{4}$ of sec. 33, T. 13 S., R. 8 W., latitude $39^{\circ} 44' 19''$ N.; longitude $111^{\circ} 04' 24''$ W., at 9h 14m p.m. l.m.t., I observe Polaris at eastern elongation in accordance with instructions in the Manual, and mark the point in the line thus determined by a tack driven in a wooden peg set in the ground 5 chs. N. of my station.

August 26, 1911.

August 27: At 8h 30m a.m. I lay off the azimuth of Polaris $1^{\circ} 31.5'$ to the west, and mark the meridian thus determined by a nail driven in a peg firmly driven in the ground west of the point established last night.

At 9h a.m. l.m.t., I set off $39^{\circ} 44'$ on the lat. arc; $10^{\circ} 19.5' N$ on the decl. arc; and mark a point in the meridian determined with the solar, by a tack driven in the stake set this a.m.; this mark falls 0.4 ins. west of the meridian established by Polaris observa-

Retracement and Resurvey of South Boundary T.13 S., R.7

Chains.

At 3 p.m. limit, I set off $39^{\circ} 44'$ on the lat. arc; $10^{\circ} 14' N.$ on the decl. arc; and mark a point in the meridian which determined with the solar; by a stake driven in the stake set this a.m.; this mark falls 0.2 ins. east of the meridian established by Polaris observation. The solar apparatus, by a.m. and p.m. observations, determines fine positions for meridians, respectively about $21'$ west and $10'$ east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

August 27, 1911.

September 9, 1911: At 9 a.m. limit, I set off $5^{\circ} 36' N.$ on the decl. arc; $39^{\circ} 38'$ on lat. arc; and determine a meridian with the solar at the cor. of Tps. 13 and 14 S., Rs. 7 and 6 E.; which is a 3-inch iron post, firmly set and marked and witnessed as described by the surveyor-general. I destroy the marks on brass cap that pertain to R. 7 E., leaving it marked

T 13 S in N. half

T 14 S in S. half

R 7 E in W. half

R 6 E in NE. quadrant; and

S 6 in SE. quadrant.

and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high F. From said cor. I run South on E. bdy. of sec. 36 and at Fall 57 lbs. W. of old cor. of Tps. 13 and 14 S., R. 7 and 6 E., which is a sandstone $15 \times 8 \times 12$ ins. above ground, marked and witnessed as described by the surveyor-general. I destroy this corner, and at my point of intersection set temp. cor. for corner of Tps. 13 and 14 S., R. 7 E.

Thence I run

revised distance 3165 feet on page 74

Retracement of the South Boundary of Township 13 S. Range 7 E.

Chains.

West on a random line along E.bdy.of sec.36

38.84 The old $\frac{1}{4}$ sec.cor., which is a sandstone 23 x 9 x 5 ins. marked and witnessed as described by the surveyor-general 4 lks.N.of my line.

40.00 Set temp. $\frac{1}{4}$ sec.cor.

80.00 I search diligently for the old cor.of secs.1,2,35, and 36, but can find no trace of it. Set temp. $\frac{1}{4}$ sec.cor.
Sept.9: At noon I was ascending a cliff near this cor., and failed to obtain a lat.observation.

From the temp.cor.of secs.1,2,35, and 36, I run West on a random line along the S.bdy.of sec.35,

39.57 The old $\frac{1}{4}$ sec.cor., which is a sandstone 24 x 14 x 6 ins.marked and witnessed as described by the surveyor general. I witness this cor.

40.00 Set temp. $\frac{1}{4}$ sec.cor.

September 9, 1911.

60.00 September 11, 1911: At this point I set off 4° 50.5' N. on the decl.arc; 39° 38' on the lat.arc; and at 9h a.m.l.m.t.determine a meridian with the solar.

79.35 A point 40 chs.F.of the re-established $\frac{1}{4}$ sec.cor.of secs. 3 and 34. I make diligent search for the old cor.of secs.2,3,34, and 35, but could find no trace of it.

Note: The total length of 2 $\frac{1}{2}$ miles according to random lines is 199.35 chs., which, divided proportionately, gives the distance between corners 39.87 chs.

The cor.of secs.2,3,34, and 35, re-established this a.m. by U.S.Transitman Swan 39.87 chs.F.of the $\frac{1}{4}$ sec.cor. of secs.3 and 34, I begin at this cor.and run

East on true resurvey line, along the S.bdy.sec.35
Ascending through dense oak brush.

17.14 Top of ridge 289 ft.above sec.cor., bears S.50° E. and NW. Leave oak brush and enter pine and aspen timber, bearing with ridge. Descend.

Resurvey of South Boundary of Township 13 S, Range 7 East.

Chains.
39.87 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 35 in N. half, and S 2 in S. half; from which
A pine 12 ins. dia. bears N. 16° 30' W. 40 lks. dist. marked $\frac{1}{4}$ S 35 B T
A pine 10 ins. diam., bears S. 7° E. 33 lks. dist. marked $\frac{1}{4}$ S 2 B T
The old $\frac{1}{4}$ sec. cor. bears E. 6 lks. dist. I destroy the cor.
42.44 Creek, 3 lks. wide, 3 ins. deep, in the bottom of a canyon 786 ft. below top of ridge, course S. 15° E.
Ascend.
44.64 Leave aspen and pine and enter oak brush, bears N. and S.
51.90 A sandstone ledge 40 ft. high and 10 chs. long bears NW. and SE.
68.50 Top of a spur 1555 ft. above creek, projects S.
Descend.
76.75 Sandstone cliff, 100 ft. high, 6 chs. long bears SW. and NE.
79.74 Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 1, 2, 35, and 36, with brass cap marked
T 13 S on N. half
T 14 S on S. half,
S 35 in NW.
R 7 E S 36 in NE.
S 1 in SE.; and
S 2 in SW. quadrant; raised a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
Land, mountainous.
Soil, stony; 3d rate.
Timber, aspen and pine.
This mile is mountainous throughout. The soil is very stony, and the slopes very steep. It would be impossible to cultivate this land; though it affords good grazing for sheep.

Resurvey of South Boundary of Township 13 S., Range 7 East.

Chains.

East on true resurvey line along the S.bdy. of sec. 36,
Descending through oak brush, over sandstone ledges.

6.15 Sandstone cliff 15 ft. high, 5 chs. long bears NW. and SE.

16.25 Spring branch 3 lks. wide, 2 ins. deep, in bottom of canyon
325 ft. below sec. cor., course S. 20° E.

Ascend.

31.64 Top of small knoll, 225 ft. above bottom of canyon, point
projects SE. Descend 186 ft. to

39.87 Set an iron post, 3 ft. long, 1 in. dia., 26 ins. in the
ground, for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 36
on N. half, and S 1 on S. half; raise a mound of stone 2
ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.

The old $\frac{1}{4}$ sec. cor. bears N. 69° E. 112 lks. dist. I destroy it.

43.30 Bottom of gulch 10 ft. below $\frac{1}{4}$ sec. cor., drains S. 15° E.
Ascend.

47.25 Top of small sharp ridge 55 ft. above bottom of gulch,
bears N. 25° W. and S. 25° E. Descend.

49.80 Wash 15 lks. wide, 5 ft. deep, in the bottom of a hollow
170 ft. below top of ridge, course S. 10° E.
Ascend.

67.54 Wash, 50 lks. wide, 18 ft. deep, course S. 15° E.

79.74 The temp. cor. of Tps. 13 and 14 S., R. 7 E., 306 ft. above
the bottom of hollow. I destroy temp. cor. and at this
point

Set an iron post 3 ft. long, 3 ins. dia., 24 ins. in the
ground, for cor. of Tps. 13 and 14 S., R. 7 E., with
brass cap marked

T 13 S in N. half

T 14 S in S. half

R 7 E in W. half

S 36 in NW.; and

S 1 in SW. quadrant; from which

A boulder 10 x 12 x 3 ft. above ground, bears N. 1°

W. 182 lks. dist., marked B O with a cross (X).

Raised a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.

Resurvey of the South Boundary of Township 13 S. Range 7 E.

Chains.

Land, mountainous.

Soil, stony; 2d and 3d rates.

Undergrowth, oak and serviceberry brush.

The land is mountainous throughout the full length of this mile. The west half is quite steep and there are numerous outcropping ledges of sandstone. There is very little timber, but a very heavy growth of oak and serviceberry brush. It is all good grazing land; and some in the eastern end might be cultivated; it would, however, be a difficult matter to irrigate; and would be very sandy for dry farming.

September 11, 1911.

Robert E. Collins

U.S. Transitman.

SUBDIVISION T. 13 S., R. 7 E.

Chains	September 11, 1911: From the cor. secs. 1, 2, 35 and 36 on the south boundary of the township, previously described, I run N. 0° 7' E., bet. secs. 35 and 36. Ascending over sandstone ledges.
3.00	A sandstone cliff 100 ft. high bears NE. and SW.; enter oak and deer brush bearing with cliff; thence along broken E. slope of ridge.
11.35	Bottom of small draw 107 ft. above cor., drains E.
19.50	Leave brush and descend over grassy slope.
26.00	Enter heavy pines, bear E. and W.
32.80	Head of a draw, drains E. A sandstone cliff 70 ft. high, bears N. 79° E. Ascend. Pines scattering.
40.00	Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{2}$ cor. of secs. 35 and 36, marked brass cap $\frac{1}{2}$ S 35 in W. half, S 36 in E. half; from which A pine 6 ins. diam. bears N. 22° 15' W., 57 lks. dist., marked $\frac{1}{2}$ S 35 B T. A pine 10 ins. diam. bears N. 41° E., 50 lks. dist., marked $\frac{1}{2}$ S 36 B T.
	September 11, 1911.
	September 13, 1911.
40.60	A white sandstone ledge 12 ft. high bears NE. and NW.
44.00	Top of spur 456 ft. above head of draw, projects SE. Leave scattering pines. Descend.
50.00	Scattering pines in the bottom of a draw 62 ft. deep, drains E. Ascend.
68.25	A sandstone cliff 100 ft. long, 70 ft. high, bears N. 70° E.
	Sept. 13: At this point I set off 4° 03.5' N. on the decl. arc; 39° 39' on the lat. arc, and at 10h a.m., 1, m. t., determine a meridian with my solar.
72.80	Top of a spur 181 ft. high projects E.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Descend.

78.75

Enter heavy pines and scattering aspen.

80.00

Set an iron post 3 ft. long; 2 ins. diam., 24 ins. in the ground, for cor. of secs. 25, 26, 35 and 36, marked on brass cap

T 13 S S 26 in NW.

R 7 E S 25 in NE.

S 36 in SE., and

S 35 in SW. quadrant;

from which

A pine 20 ins. diam. bears N.77°00'W., 74 lks. dist., marked T 13 S R 7 E S 26 B T.

A balsam 18 ins. diam. bears N.55°45'E., 39 lks. dist., marked T 13 S R 7 E S 25 B T.

A pine 3 ft. diam. bears S.59°45'E., 65 lks. dist., marked T 13 S R 7 E S 36 B T.

An aspen 10 ins. diam. bears S.55°W., 68 lks. dist., marked T 13 S R 7 E S 35 B T.

Clouds and fog prevent my taking a lat. observation.

Land, mountainous.

Soil, stony; 3rd rate.

Timber, pines and aspen.

Undergrowth, oak, deer brush.

This land is very steep and stony and totally unfit for cultivation. There is considerable oak, service berry, deer brush and some choke cherry brush, and in the bottoms of the hollows considerable pine timber.

On the E. slope of the ridges near the top is a heavy growth of scrub aspen. There are many indications of coal. The hills are good grazing grounds for sheep.

East, on a random line bet. secs. 25 and 36.

40.00

Set temp. 1/4 sec. cor.

79.81

Intersect the E. bdy. of Tp. 12 lks. N. of the cor. of

SUBDIVISION T. 13 S., R. 7 E.

Chains

secs. 25 and 36.

Thence I run

N.89°55'W., on a true line bet. secs. 25 and 36.

Ascending through dense oak and choke cherry.

3.51 Top of ridge 110 ft. above sec. cor. bears N.30°E. and S.30°W. Leave brush, bears with ridge.

Descend.

8.00 Enter pine, bears N.25°E. and S.25°W.

8.50 Bottom of ravine 118 ft. deep, course N.20°E.

13.80 Top of a spur 84 ft. high, projects N.

Descend.

17.80 The bottom of a ravine 120 ft. deep, course N.15°E.

Ascend.

19.90 Leave pines, bear N. and S.

25.50 Enter pines, bear N.50°E. and SE.

26.30 Bottom of a ravine 556 ft. deep, course N.50°E. Leave pines and enter aspen bearing with ravine.

Ascend.

39.05 Top of ridge 370 ft. high, bears N.10°W. and S.10°E.

Leave aspen, bears with ridge.

Descend.

September 13, 1911.

September 14, 1911.

39.905 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground for 1/4 sec. cor., marked 1/4 S 25 on N. half; S 36 on S. half; raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor. Pits impracticable. No trees of sufficient diam. within limits.

59.40 Bottom of canyon 535 ft. deep, course S.40°W. Pines in bottom.

Ascend.

62.55 A spur 81 ft. high projects S.

Descend.

68.30 Enter pines, bear N.20°W. and S.20°E.

69.30 Bottom of canyon 155 ft. deep, drains S.29°E.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Ascend 350 ft. to
 79.81 The cor. of secs. 25, 26, 35 and 36.
 Land, mountainous.
 Soil, sand and stony, 3rd and 4th rate.
 Timber, aspen and pine.
 This land is all mountainous and steep, and the soil very stony. The E. and NE. slopes are timbered with aspen and pine, but the aspen is much of it, small, gnarled and scrubby. Where untimbered these slopes are usually covered with a dense growth of oak and service berry brush; and choke cherry grows among the aspen as well as on untimbered slopes. The west and SW. slopes are generally covered with a coarse tough grass and scattering bunches of brush. Along the tops of the spurs the sandstone ledges come to the surface and there are indications of a number of coal seams visible on most of the spurs.

September 14: At the cor. of secs. 25, 26, 35 and 36, I set off $39^{\circ}39'$ on the lat. arc; $3^{\circ}41.5'H.$ on the decl. arc, and at 9h a.m., l.m.t., determine a meridian with my solar.

Thence I run

N. $0^{\circ} 7'E.$, bet. secs. 25 and 26.

Along broken E. slope, through scattering pines.

.60 Enter dense willow and scrub aspen, bear E. and W.

3.60 Leave aspen and willow, bear $S.50^{\circ}W.$ and $N.50^{\circ}E.$ Enter dense oak brush, bears with aspen.

Ascend.

15.20 Enter an aspen covered bench on E. side of ridge, bears E. and W.

Gradual ascent.

26.00 Leave aspen, bears E. and W.

34.00 Enter aspen with undergrowth of willow and choke cherry, bears E. and W.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Clouds prevent my taking a lat. observation.

40.00 On a narrow bench 410 ft. above sec. cor. I set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap 1/4 S 26 on W. half, and S. 25 on E. half; from which

An aspen 6 ins. diam. bears N.39°10'E., 40 lks.

dist., marked 1/4 S 25 B T.

An aspen 6 ins. diam. bears N.78°W., 77 lks.

dist., marked 1/4 S 26 B T.

41.00 Leave aspen and undergrowth, bear E. and W.

42.20 Top of sandstone ridge 30 ft. above 1/4 cor., bears N.70°E. and S.70°W.

Descend.

48.90 Enter heavy aspen and pine, bear SW. and S.80°E.

51.50 Bottom of a ravine 154 ft. below top of ridge, course N.40°E.

Ascend gradually along E. side of spur.

68.70 Top of spur 30 ft. above bottom of ravine, projects NE. Descend.

September 14, 1911.

70.00 September 15, 1911: At this point I set off 39°40' on the lat. arc; 3°18.5'N. on the decl. arc, and at 9h 15m a.m., l.m.t., determine a meridian with the solar.

80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 23, 24, 25 and 26, marked on the brass cap

T 13 S S 23 in NW.

R 7 E S 24 in NE.

S 25 in SE., and

S 26 in SW. quadrant;

from which

A pine 12 ins. diam. bears N.31°30'W., 34 lks.

dist., marked T 13 S R 7 E S 23 B T.

A pine 5 ins. diam. bears N.36°30'E., 19 lks.

dist., marked T 13 S R 7 E S 24 B T.

A pine 7 ins. diam. bears S.62°50'E., 34 lks.

SUBDIVISION T. 13 S., R. 7 E.

Chains

dist., marked T 13 S R 7 E S 25 B T.

A pine 14 ins. diam. bears S.71°50'W., 153 lks.

dist., marked T 13 S R 7 E S.26 B T.

This cor. sets on a steep side hill 290 ft. below the top of the spur.

Land, mountainous.

Soil, stony and sandy loam 2nd and 3rd rate.

Timber, aspen and pine.

Undergrowth, choke cherry and willow.

This land is very mountainous and steep, and the soil quite stony. In the south half the side hills are covered with scattering bunches of aspen with a choke cherry undergrowth. Where not timbered there is a considerable growth of oak, choke cherry or sagebrush, with occasional open spaces where there is a growth of tough, coarse grass. Some indications of coal are to be found along the tops of spurs. The country is fitted for no agricultural purposes except grazing.

- 8.50 S.89°55'E., on a random line bet. secs. 24 and 25. September 15: At this point I set off 3°15.5'N. on the decl. arc; and at 11h 56m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 39°40'.
- 40.00 Set temp. 1/2 sec. cor.
- 79.83 Intersect the E. bdy. of Tp. 7 lks. S. of the cor. of secs. 24 and 25. Thence I run
N.89°58'W., on a true line bet. secs. 24 and 25. Ascending through dense oak brush.
- 8.53 Top of spur 213 ft. above cor., projects S. Descend.
- 16.75 Bottom of ravine 204 ft. deep, course S. Ascend.
- 23.05 Top of spur 170 ft. above bottom of ravine, projects S.

SUBDIVISION T. 13 S., R. 7 E.

Chains	
	Descend.
30.30	Leave oak brush and enter dense scrub aspen, bears N. and S.
31.15	A ravine 173 ft. deep drains S.40°E. Ascend.
37.60	Leave scrub aspen and enter dense oak and service berry, bears N. and S.
39.915	Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 24 on N. half, and S 25 on S. half; raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable. No trees within limits. This cor. 295 ft. above bottom of ravine.
42.25	Leave oak and service berry and enter dense scrub aspen, bears N. and S.
47.80	Leave aspen, bears N.40°E. and S.40°W.
49.00	A ridge 131 ft. above $\frac{1}{2}$ sec. cor. bears N.30°E. and S.30°W. Descend.
62.50	A ravine 361 ft. deep, course N. Enter aspen and pine, bear N. and S. Ascend.
71.35	Top of spur 255 ft. above bottom of ravine, projects N.40°E. Descend. Aspen larger on NW. slope.
79.83	The cor. of secs. 23, 24, 25 and 26, 85 ft. below top of spur. Land, mountainous. Soil, sandy and stony; 3rd rate. Timber, aspen and pine with undergrowth of choke cherry, oak and service berry. The land is unfit for cultivation, being steep and stony. There is considerable timber on the N. slopes, but that on the E. and W. slopes is too small to be of value. There are numerous indications of coal.

September 15, 1911.

SUBDIVISION T. 13 S., R. 7 E.

Chains

September 16:

S. 0° 7' E., bet. secs. 23 and 24.

Descending through heavy pines.

5.90 Bottom of left fork of Gordon Creek, 4 lks. wide, 1 ft. deep, in canyon 194 ft. below sec. cor., course N. 65° E.

Ascend.

9.00 Leave timber and enter oak, bears with canyon.

12.00 A bunch of aspen 60 lks. wide extends down the bottom of a draw draining SE.

24.50 Top of a spur 356 ft. high, projects N. for 2 chs., then turns N. 70° E.

Descend.

25.90 Enter heavy pines and aspen.

Sept. 16: At this point I set off 2° 55.5' N. on the decl. arc; 39° 40' on the lat. arc, and at 9h a.m., 1.m.t., determine a meridian with the solar.

40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 23 in W. half, S 24 in E. half; from which an aspen 6 in. diam. bears N. 85° W., 60 lks. dist., marked $\frac{1}{4}$ S 24 B T.

An aspen 9 ins. diam. bears N. 80° 15' E., 60 lks. dist., marked $\frac{1}{4}$ S 24 B T.

This cor. sets on a point extending out from spur and in 213 ft. below the top of spur.

41.90 A balsam 20 ins. diam. on line, mkd. 2 notches on N. & S. side

51.00 The right fork of Gordon Creek, 4 lks. wide, 2 ins. deep in rock gorge in bottom of canyon 405 ft. below $\frac{1}{4}$ sec. cor., course S. 50° E. Cliff on N. side of gorge 85 ft. high. Ascend. Leave timber, enter dense oak brush bears N. and E.

61.00 Top of spur 382 ft. above creek, projects SE. Ascend, over ground sloping to SE.

64.00 Enter aspen, bears N. and E. Leave oak brush.

SUBDIVISION T. 13 S., R. 7 E.

Chains

- 69.80 Leave aspen, bears N.40°E. and SW. Enter oak brush, bears with aspen.
- 73.60 Leave oak, bears E. and W.
- 80.00 On the top of a spur 734 ft. above Gordon Creek, bearing N.30°W. and S.50°E.

I set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 13, 14, 23 and 24, marked on brass cap

T 13 S S 14 in NW.

R. 7 E S 13 in NE.

S 24 in SE., and

S 23 in SW. quadrant; from which

An aspen 5 ins. diam., bears N.32°W., 151 lks. dist., marked T 13 S R 7 E S 14 B T.

An aspen 5 ins. diam., bears N.33°E., 171 lks. dist., marked T 13 S R 7 E S 13 B T.

No other trees within limits; raise a mound of stone 2 ft. base, 1½ ft. high W. of cor. Pits impracticable. Land, mountainous.

Soil, sandy and stony, 2nd and 4th rate.

Timber, aspen and pine.

Undergrowth, oak, service berry and choke cherry.

The land here is very rough and mountainous; and the soil is quite stony, particularly along the right fork of Gordon Creek. There is considerable timber on the N. and NE. slopes, while the S. and SE. slopes are generally covered with oak and service berry with grassy patches higher up on the ridges. Gordon Creek has a great many small branches, all of which are in deep canyons with very steep slopes on both sides; the main branches run in deep canyons which in many places have solid rock bottoms, and the current is therefore quite swift. The country is fitted for grazing purposes only. Coal indications are numerous.

September 16, 1911.

George C. Swann
U.S. Transitman.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Survey commenced December 5; 1914, and executed with a Young and Sons light mountain transit No. 8517 with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other and reading to single minutes of arc; which is also the least count of the verniers of the lat. and decl. arcs.

I examine the adjustments of the transit and find no errors. The solar apparatus was not tested on a Polaris meridian until December 6; for record of this test see field notes W. Bdy. T. 13 S., R. 8 E.

A steel tape, 5 chains long was used in the field work of this survey, together with a clinometer for determining slope angles, and the reduced horizontal distances only appear in the official field notes. The tape was tested November 29, comparison being made with a standard tape, 1 chain long, kept and used for that purpose.

In the declination arc settings .75 of the tabulated refraction for computing declinations is used in the survey of the subdivisional lines in this township, due to the altitude of the country which is approximately 8000 ft.

I begin at the true cor. point of secs. 13 and 24 on the E. bdy. of the tp. described in the resurvey of W. bdy. T. 13 S. R. 8 E.

The sky is overcast and intermittent storms of snow all day prevent any transit work. I therefore measure West, bet. secs. 13 and 24 for distance only.

40.16 The $\frac{1}{4}$ sec. cor. set by Messrs. Collier and Swan, U.S. Transitmen in 1911. I destroy this cor.

80.00 The cor. of secs. 13, 14, 23 and 24, established by Collier and Swan in 1911, which is an iron post, 2 ins. in dia., set 24 ins. in a mound of stone, properly marked and witnessed.

December 5, 1914.

Dec. 7: At 9h a.m. apparent time, I set off $39^{\circ}41'$ on the lat. arc; $22^{\circ}32'S.$ on the decl. arc; and determine

SUBDIVISION T. 13 S., R. 7 E.

Chains

a meridian with the solar at the cor. of secs. 13, 14, 23 and 24. Thence I run

East on a random line bet. secs. 13 and 24,

80.00 Intersect E. bdy. of the tp. at the true cor. point of secs. 13 and 24 heretofore described. Thence

West on true line bet. secs. 13 and 24.

Over rough mountainous land draining S., through dense aspen timber and undergrowth of oak, sage and buck brush.

Ascend abruptly over SE. slope of spur.

.70 Leave aspen timber, bears NE. and SW.

8.71 Top of sharp rocky spur, 164 ft, above cor., projects SW.

Leave oak, sage and buck brush, descend abruptly over steep grassy W. slope.

17.77 Ravine, 262 ft. below spur, course SW.

Enter oak brush, ascend abruptly over SE. slope.

21.13 Point of spur, 56 ft, above ravine, projects S.

Descend abruptly over SW. slope.

24.04 Bottom of ravine and wash, 10 lks. wide, 4 ft. deep, 74 ft. below spur, course SE.

Leave oak brush, enter dense aspen timber, bears SE. and NW. Ascend abruptly over E. slope.

39.00 Enter dense willow undergrowth, bears N. and S.

40.00 463 ft. above ravine. Set an iron post, 3 ft. long, 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap marked

S 13
 $\frac{1}{4}$

S 24
1911

from which

An aspen, 6 ins. diam., bears N. 25° W.,

18 lks. dist., marked $\frac{1}{4}$ S 13 B T.

An aspen, 5 ins. diam., bears S. 38° W.,

13 lks. dist., marked $\frac{1}{4}$ S 24 B T.

40.60 Leave aspen timber, bears N. and S.

41.23 Top of ridge, 25 ft. above $\frac{1}{4}$ sec. cor., bears NW. and SE. Descend abruptly over SW. slope.

SUBDIVISION T. 13 S., R. 7 E.

Chains

- 42.90 Leave willow undergrowth, enter dense oak and service brush
- 45.09 Leave brush, enter aspen thicket, bears N. and S.
- 48.09 Leave aspen thicket, enter grassy slope.
- 54.75 Leave grassy slope, enter aspen thicket, bears NE. and SW.
- 55.88 Bottom of ravine and wash, 30 lks. wide, 10 ft. deep,
339 ft. below ridge, course SE.
Gradually ascend over SW. slope.
- 57.10 Leave aspen timber, enter oak, service and sage brush.
- 58.15 Low spur, 34 ft. above ravine, projects S.
Descend abruptly over W. slope.
- 59.35 Leave oak, service and sagebrush, enter aspen timber.
bears N. and S.
- 60.32 Bottom of ravine and stream, 3 lks. wide, 1 1/2 ins. deep,
good water, 44 ft. below spur, course SE.
Ascend abruptly.
- 68.50 Enter willow undergrowth, bears N. and S.
- 74.86 Leave aspen timber, bears N. and S.
- 76.86 Leave willows, enter scattering service brush, bears
N. and S.
- 80.00 537 ft. above stream. The cor. of secs. 13, 14, 23 and 24.
Land rough and broken mountains with steep E. and W.
slopes of ridges into ravines draining S.
Soil generally gravelly and rocky of sandstone formation
on rocky subsoil, 3rd rate.
Timber, scattering patches of dense aspen.
Undergrowth, dense oak, service, sage, buck and choke
cherry usually found on the slopes near the bottoms
of ravines the higher slopes being covered with a
tough grass.

Numerous indications of coal along the line.

December 7, 1914.

U.S. Surveyor.

Sept. 18, 1911: At the cor. of secs. 13, 14, 23 and 24, I
set off 2°06' N. on the decl. arc, and at 11h 54m a.m.,

SUBDIVISION T. 13 S., R. 7 E.

Chains

l.m.t., observe the sun on the meridian; the resulting
lat. is $39^{\circ}41'$.

N. $0^{\circ}07'E.$, bet. secs. 13 and 14.

Along steep E. slope over broken ground.

1.40 Enter heavy aspen with undergrowth of willow and choke
cherry, bears E. and W.

31.10 The top of a saddle in ridge, 105 ft. above sec. cor.,
bears NE. and SW. Leave choke cherry and willow,
bear E. and SW. Descend.

September 18, 1911.

September 19, 1911:

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 14
on W. half, S. 13 on E. half, from which

An aspen 5 ins. diam., bears S. $81^{\circ}W.$,

20 lks. dist. marked $\frac{1}{4}$ S 14 B T.

An aspen 10 ins. diam., bears S. $38^{\circ}45'E.$,

25 lks. dist., marked $\frac{1}{4}$ S 13 B T.

Sept. 19: At this cor. I set off $1^{\circ}47.5'N.$ on the decl.
arc; $39^{\circ}41.5'$ on the lat. arc, and at 9h a.m., l.m.t.,
determine a meridian with the solar.

43.20 Spring branch 1 lk. wide 2 ins. deep in bottom of a wash
5 lks. wide, 5 ft. deep in a hollow 175 ft. below top
of ridge, course N. $55^{\circ}E.$ Ascend. Aspen scattering.

39.97 From this point a rock monument on a peak bears S. $41^{\circ}53'E.$

A rock monument on a peak bears S. $18^{\circ}33'W.$

61.50 Top of spur 288 ft. above hollow projects N. $60^{\circ}E.$

Enter heavy pines and aspen, bear with spur. Descend.

80.00 Set an iron post 3 ft. long, 2 ins. diam. 24 ins. in the ground
for cor. of secs. 11, 12, 13 and 14, marked on brass cap

T 13 S S 11 in NW.

R 7 E S 12 in NE.

S 13 in SE. and

S 14 in SW. quadrant; from which

A pine 17 ins. diam., bears N. $37^{\circ}10'W.$, 194 lks.
dist. marked T 13 S R 7 E S 11 B T.

A balsam 14 ins. diam., bears N. $32^{\circ}15'E.$, 65 lks.
dist., marked T 13 S R 7 E S 12 B T.

A balsam 7 ins. diam., bears S. $34^{\circ}15'E.$, 65 lks.

SUBDIVISION T. 13 S., R. 7 E.

Chains

dist., marked T 13 S R 7 E S 13 B T.

A balsam 7 ins. diam., bears S. $83^{\circ}20'W.$, 194 lks.

dist., marked T 13 S R 7 E S 14 B T.

This cor. is 372 ft. below the top of the spur.

Land mountainous. Soil sandy loam and stony 2nd and 3rd rate. Timber, aspen and pine, Undergrowth choke cherry and willow. The first 30 chs. of this line is on the Gordon Creek side of the ridge; the balance of the mile is on the Beaver Creek side. On the Gordon Creek side the slopes are steep and the soil very stony, ledges of sandstone being very close to the surface, while on the Beaver Creek side the slopes are not so steep and the soil is somewhat deeper. There is considerable timber and the slopes afford good grazing grounds but are too steep for farming.

N. $89^{\circ}54'E.$ on a random line bet. secs. 12 and 13.

13.00 September 19: At this point I set off $1^{\circ}43.5'N.$ on the decl. arc, and at 11h 54m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is $39^{\circ}42'$ or within 1' of the calculated lat.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.84 Intersect the E. bdy. of the Tp. 7 lks. N. of the cor. of secs. 12 and 13. Thence I run

S. $89^{\circ}57'W.$ on a true line bet. secs. 12 and 13.

Ascending through aspen and willows.

6.55 Top of spur, 91 ft. above cor., projects NW. Saddle in ridge bears SW. Ridge bears SW. and SE. Leave aspen and willow bears NW. and SE. Descend.

17.85 Enter aspen, bears N. and SW.

22.00 Leave aspen, bears N. and SW.

23.00 Spring branch 3 lks. wide 2 ins. deep in bottom of ravine 273 ft. below top of spur, course N. Ascend.

23.55 Trail bears N. $15^{\circ}E.$ and S. $15^{\circ}W.$

24.55 Enter scattering aspen, bears N. and S.

28.50 Point of spur 168 ft. above ravine, projects NE. Enter head aspen and scattering pine, bears NE. and SW. along broken N. slope.

SUBDIVISION T. 13 S., R. 7 E.

Chains

35.50 Enter heavy pine, bears N. and SW. Descend along N. slope.

39.92 Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground for 1/4 sec. cor., marked on brass cap 1/4 S 12 on N. half and S 13 on S. half; from which

A pine 8 ins. diam., bears N. 84°W., 61 lks. dist., marked 1/4 S 12 B T.

An aspen 5 ins. diam., bears S. 45°W., 64 lks. dist., marked 1/4 S 13 B T.

Aspen becomes scattering; scattering bunches of willow among pines.

49.70 Leave timber, enter boggy bottom land and dense willows bear N. 60°E. and SW. Beaver Creek 4 lks. wide 3 ins. deep in bottom of canyon 132 ft. below top of spur, course N. 60°E. Spring branch enters the main creek from a hollow to the SW. Across bottom land crossing back and forth across creek.

53.30 Leave creek and boggy land.

59.70 Leave bottom land and willows, enter pines and aspen, bear SE. and N. 70°W.

Ascend gradually along S. side of Beaver Canyon.

75.55 Leave heavy and enter scattering pines and aspen.

79.84 The cor. of secs. 11, 12, 13 and 14, which is 115 ft.

above the point where line leaves bottom land.

Land mountainous. Soil sandy loam and stony, 1st and 3rd rate. Timber, aspen and pine. Undergrowth, willows.

This land is all mountainous except 10 chs. which is

covered with a dense growth of willows. The soil on

the side hills is quite stony, but the bottom land is a

sandy loam which is quite rich. The hills afford good

grazing and there are about 10 acres of bottom land

which might be farmed; but the bottom of the canyon is

quite narrow except at the point where a canyon enters

from the SW., at which point it opens out to about 7 chs.

in width.

September 19, 1911.

September 20, 1911: At the cor. of secs. 11, 12, 13 and 14

I set off 1°24'N. on the decl. arc; 39°41' on the lat.

arc, and at 8h a.m., l.m.t., determine a meridian with

the solar. Thence I run

SUBDIVISION T. 13 S., R. 7 E.

Chains	
	N. 0° 01' W. bet. secs. 11 and 12.
	Descending through scattering pine.
1.40	Wagon road from Price to Scofield bears E. and W.
2.00	Dry wash 8 lks. wide 3 ft. deep in bottom of Beaver Canyon
	29 ft. below sec. cor.; course E. Enter aspen, bears E. and
	Ascend.
19.25	Top of ridge 405 ft. high bears W. and SE. Descend.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in t
	ground for $\frac{1}{4}$ sec. cor., marked on the brass cap $\frac{1}{4}$ S 11
	on W. half and S 12 on E. half; from which
	An aspen 10 ins. diam., bears N. 83° 15' W.,
	60 lks. dist. marked $\frac{1}{4}$ S 11 B T.
	An aspen 8 ins. diam., bears N. 75° E.,
	22 lks. dist. marked $\frac{1}{4}$ S 12 B T.
	September 20: At this cor. I set off 1° 19.5' N. on the decl
	arc, and at 11h 54m a.m., l.m.t., observe the sun on the
	meridian; the resulting lat. is 39° 42'.
55.00	A spring branch 2 lks. wide 1 in. deep in the bottom of
	a hollow 322 ft. below top of ridge; course E. Leave
	aspen and pines, bear E. and W. Ascend. Enter sagebrush
	bears E. and W.
59.40	The bottom of a draw, bears S. 10° E.
63.00	Leave sagebrush, enter aspen, bears NW. and SE.
70.15	Leave aspen, enter sagebrush, bears NW. and SE.
77.25	Top of spur 372 ft. above spring branch, projects SE. Desc
77.40	Leave sagebrush, enter aspen, bears NW. and SE.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in t
	ground for cor. of secs. 1, 2, 11 and 12, marked on brass c
	T 13 S S 2 in NW.
	R 7 E S 1 in NE.
	S 12 in SE. and
	S 11 in SW. quadrant; from which
	An aspen 4 ins. diam., bears N. 84° W., 61 lks.
	dist., marked T 13 S R 7 E S 2 B T.
	An aspen 5 ins. diam., bears N. 42° 20' E., 36 lks.
	dist., marked T 13 S R 7 E S 1 B T.
	An aspen 5 ins. diam., bears S. 75° 20' E., 59 lks.
	dist., marked T 13 S R 7 E S 12 B T.
	An aspen 7 ins. diam., bears S. 45° W., 64 lks.
	dist., marked T 13 S R 7 E S 11 B T.
	Land mountainous. Soil, sandy loam and stony, 1st and 4th
	rate. Timber aspen and pine. Undergrowth sagebrush. Th
	mile mountainous throughout the entire length. The soil
	ranges from a rich sandy loam to ledges of solid rock

SUBDIVISION T. 13 S., R. 7 E.

Chains

The land is all too steep for farming, but affords grazing for a great many cattle and sheep.

20.00

N.89°57'E., on a random line bet. secs. 1 and 12.
Discontinue work for the day.

September 20, 1911.

September 21, 1911: At the above described point, at

8h. 0m a.m., l.m.t., I set off 1° 1'N., on the decl. arc; 39°42.5' on the lat. arc, and determine a meridian with the solar.

Thence I continue my line

40.00

Set temp. 1/4 sec. cor.

79.86

Intersect E. bdy. of Tp. 14 lks. N. of the cor. of secs. 1 and 12.

Thence I run

N.89°57'W., on a true line bet. secs. 1 and 12.
Ascending through dense oak, choke cherry and scrub

aspen and over outcropping sandstone ledges bearing N. and S.

3.26

Top of spur, 75 ft. above cor., projects S. Leave oak, choke cherry and aspen and enter sagebrush, bears N. and S.

Descend.

8.11

Leave sage, enter aspen, bears NE. and SW. Leave sandstone ledges.

16.75

Bottom of hollow 290 ft. deep drains S.10°E.
Ascend.

21.25

Top of a spur 61 ft. high projects S.20°E.

24.25

A wash 6 lks. wide 2 ft. deep, in the bottom of a gulch 14 ft. below top of spur, drains S.40°E.

Ascend.

39.25

Leave heavy enter scattering aspen and pine, bear N.

and S. Outcropping sandstone ledges bearing N. and S.

39.93

Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for 1/4 sec. cor., marked on brass cap

Chains

- $\frac{1}{2}$ S 1 on N. half, S 12 on S. half; from which
 An aspen 5 ins. diam. bears N.55°W., 66 lks. dist.
 marked $\frac{1}{2}$ S 1 B T.
 An aspen 10 ins. diam. bears S.35°E., 56 lks.
 dist., marked $\frac{1}{2}$ S 12 B T.
- 42.25 Top of ridge 470 ft. high bears NW. and SE.
 Descend.
- 47.20 Leave scattering timber, bears N. and S.
- 54.40 Enter heavy aspen with choke cherry undergrowth, bears
 N. and S.
- 62.25 Leave choke cherry, bears N. and S.
- 69.50 A wash 8 lks. wide 2 ft. deep, in ravine 417 ft. deep,
 drains S.25°E. Ascend.
- 79.86 The cor. of secs. 1, 2, 11 and 12, 280 ft. above bottom
 of ravine.
- September 21: On account of clouds I was unable to take
 a lat. observation this day.
- Land, mountainous.
- Soil, sandy loam and stony; 2nd and 4th rate.
- Timber, aspen.
- Undergrowth, choke cherry, oak and sagebrush.
- The land along this line is all mountainous and unfit
 for cultivation. The soil is quite stony and shallow
 with solid sandstone ledges outcropping over a con-
 siderable portion of it. A coarse tough grass grows
 on most of it, making this a good grazing ground.
-
- N.0° 1'W., on a random line bet. secs. 1 and 2.
 27.00 I set a temp. mark and discontinue work for the day.
 September 21, 1911.
 September 30, 1911: At the point set by me Sept. 21,
 on the line bet. secs. 1 and 2, 27 chs. from the cor.
 of secs. 1, 2, 11 and 12, I set off 2°30' S. on the
 decl. arc; 39°42.5' on the lat. arc. and at 8h a.m.,
 l.m.t., determine a meridian with my solar.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Thence I continue my line

N.0° 1'W., bet. secs: 1 and 2.

40.00 Set temp. 1/4 sec. cor.

78.75 Intersect the N. bdy. of Tp. 28 lks. W. of the cor. of secs. 1, 2, 35 and 36, which is a sandstone 3 x 12 x 18 ins., marked as desciebed by the surveyor general. In place of the stone, I set an iron post 3 ft. long, 3 ins. diam., 26 ins. in the ground, marked on brass cap

T 12 S S 35 in NW.

R 7 E S 36 in NE.

R 7 E S 1 in SE. and

T 13 S S 2. in SW. quadrant;

from which

An aspen 4 ins. diam. bears N.56°50'W., 28 lks. dist., marked T 12 S R 7 E S 35 B T.

An aspen 4 ins. diam. bears N.32°10'E., 19 lks. dist., marked T 12 S R 7 E S 36 B T.

An aspen 4 ins. diam. bears S.56°35'E., 15 lks. dist., marked T 13 S R 7 E S 1 B T.

An aspen 4 ins. diam. bears S.31°35'W., 25 lks. dist., marked T 13 S R 7 E S 2 B T.

Thence I run

S.0°11'W., on a true line bet. secs. 1 and 2.

Gradually ascending through heavy aspen.

3.75 A spur projects W. 10 chs.

Descend.

10.10 A creek 4 lks. wide 2 ins. deep, in a hollow 55 ft. below cor., course NW.

Ascend.

13.70 An old saw mill road bears N.40°W. and S.40°E.

18.75 An old saw-mill seat about 3 chs. E. of line.

22.00 A spur 131 ft. above creek, projects E. Enter scattering pine. Slight descent.

26.00 Bottom of hollow 10 ft. below top of spur, drains NE.

SUBDIVISION T. 13 S., R. 7 E.

Chains

Ascend.

38.75 On a NW. slope 216 ft. above bottom of hollow, I set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 2 in W. half and S. 1 in E. half; from which

An aspen 18 ins. diam. bears N. 88° E., 28 lks. dist., marked $\frac{1}{4}$ S 1 B T.

An aspen 10 ins. diam. bears S. 85° 50' W., 68 lks. dist., marked $\frac{1}{4}$ S 2 B T.

Enter heavy pine and scattering aspen, bears W. and NE.

56.50 Top of ridge 278 ft. above $\frac{1}{4}$ sec. cor., bears W. and S. 80° E.

Descend gradually.

59.00 Leave heavy pine and enter heavy aspen, bear E. and W. Abrupt descent.

66.75 Head of a hollow 272 ft. below top of ridge, drains S. 50° E.

Ascend.

78.75 The cor. of secs. 1, 2, 11 and 12, 50 ft. above hollow. Land, mountainous.

Soil, stony; 2nd and 3rd rate.

Timber, aspen and pine.

This land is all mountainous and heavily timbered. It is too steep for cultivation and the soil is very stony, though in a few places in the northern part of the sec. there is a sandy loam. There is good grazing and considerable timber could be cut from these hills.

George C. Swan

U. S. Transitman.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

September 14, 1911: At the cor. of secs. 2, 3, 34 and 35, on the S. bdy. of Tp., heretofore described, I set off 3°42'N. on the decl. arc; 39°38' on the lat. arc; and at 9h 0m a.m., l.m.t., determine a meridian with the solar.

Thence I run

N.0°07'E. bet. secs. 34 and 35.

Ascending over sandstone ledges; through dense oak brush.

- 15.40 Leave brush bearing E. and W., enter grassy slope.
- 20.70 Top of grassy ridge, 735 ft. above sec. cor., bears NW. and SE. Descend.
- 22.70 Enter heavy aspen, bearing NW. and SE.
- 32.00 Leave heavy timber; enter dense willow and scattering aspen, bearing E. and W.
- 36.05 Gulch, 235 ft. below top of ridge, drains N.80°E. Ascend.
- 37.25 Leave dense willow and enter oak brush, 8 ft. high, bearing E. and W.
- 40.00 Top of spur, projects N.65 ft. above gulch. Set an iron post 3 ft. long, 1 in. dia., 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 34 on W. half, S. 35 on E. half; from which
- An aspen 4 ins. dia., bears S.1°W.,
145 lks. dist. marked $\frac{1}{4}$ S 34 B T.
- An aspen 4 ins. dia., bears S.83°45'E.,
255 lks. dist. marked $\frac{1}{4}$ S 35 B T.
- 41.40 Leave oak brush, enter heavy aspen bearing E. and W.
- 46:15 Gulch 68 ft. below top of spur, course E. Ascend.
- 46:90 Leave heavy aspen; enter dense oak brush, bearing NE. and SW.
- 53.45 Top of spur, 110 ft. above gulch, projects E. Descend.
- 56.00 Leave oak brush, enter aspen bearing NE. and SW.
- 59.85 Spring branch 2 lks. wide, 1 in. deep, in bottom of a hollow 218 ft. deep, course S.80°E.

SUBDIVISION OF T. 13 S. R. 7 E.

Chains

Ascend.

61.90 Leave aspen and enter oak brush bearing E. and W.

68.15 Top of spur, 362 ft. above bottom of hollow, projects E.

Descend.

70.40 Leave oak brush, enter heavy aspen bearing E. and W.

74.30 Bottom of gulch, 25 ft. deep, drains E.

Ascend.

80.00 Set an iron post 3 ft. long, 2 ins. dia., 24 ins. in the ground for cor. of secs. 26, 27, 34 and 35 marked on brass cap

T 13 S S 27 in NW.

R 7 E S 26 in NE.

S 35 in SE.; and

S 34 in SW. quadrant; from which

An aspen, 5 ins. dia., bears N. 39° 50' W.,

37 lks. dist. mkd. T 13 S R 7 E S 27 B T.

An aspen, 12 ins. diam., bears N. 36° 20' E.,

72 lks. dist. marked T 13 S R 7 E S 26 B T.

An aspen 14 ins. dia., bears S. 17° 15' E.,

68 lks. dist. marked T 13 S R 7 E S 35 B T.

An aspen 7 ins. dia., bears S. 65° W.,

24 lks. dist. marked T 13 S R 7 E S 34 B T.

Land mountainous.

Soil sandy loam and stony, 2d and 3d rate.

Timber aspen.

Undergrowth oak brush and willow.

This line is mountainous through its length, and is covered with a heavy growth of aspen timber on 31.70 chs., the balance being covered with a dense growth of oak brush with the exception of 7.30 chs. The soil on the S. side of the high ridge is quite stony, sandstone ledges being close to the surface, and outcropping over a large portion of the country. On the N. side of the ridge the soil is deeper though still stony. The slopes are steep and unsuited to cultivation.

The day being cloudy I was unable to obtain a lat. obser-

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

vation on this date.

September 14, 1911.

September 15, 1911: At the cor. of secs. 26, 27, 34 and 35, I set off 3°19'N. on the decl. arc, 39°39' on the lat. arc, and at 8h 30m a.m., l.m.t., determine a meridian with my solar.

Thence I run

East on a random line bet. secs. 26 and 35.

40.00 Set temp. 1/4 sec. cor.

Sept. 15: At this point I set off 3°15.5' on the decl. arc, and at 11h 56m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 39°39'.

79.81 Intersect N. and S. line 33 lks. S. of the cor. of secs. 25, 26, 35 and 36. Thence I run

S. 89°45'W. on a true line bet. secs. 26 and 35.

Ascending through pine timber.

3.70 Leave pine and enter aspen, bearing N. and S.

8.80 Leave aspen, bearing NW. and SE.

10.06 Top of a rocky ridge, 285 ft. above cor., bears S. 25°E., and N. 10°W. for 4 chs., then turns N. 35°E.

Descend.

21.30 Enter dense oak brush, bearing NW. and SE.

24.90 Leave oak, enter aspen timber, bearing N. and S.

29.41 Wash 10 lks. wide, 10 ft. deep, in the bottom of a hollow 513 ft. below top of ridge. Wash drains S. 10°E.

Ascend.

31.40 Point of spur, projecting SE., 75 lks. N. of line a sandstone cliff 40 ft. high 1 ch. long, bears E. and W.

Descend.

33.81 Wash 3 lks. wide, 18 ins. deep, drains S. 70°E. in bottom of gulch. Ascend.

39.905 Set an iron post 3 ft. long, 1 in. dia., 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 1/4 S 26 in N. half S 35 in S. half; from which

Chains

- An aspen 4 in. diam., bears N. 6° E.,
 13 lks. dist. marked $\frac{1}{2}$ S 26 B T.
- An aspen 4 in. diam., bears S. 45° 30' E.,
 34 lks. dist. marked $\frac{1}{2}$ S 35 B T.
- The cor. set on an E. slope 200 ft. above bottom of
 hollow and 30 ft. lower than sec. cor.
- 53.56 Leave aspen bears W. and SE.
- 57.31 The west edge of aspen bears NW. Enter sage and scatter-
 ing service berry bears NW. and SE.
- 58.30 Top of ridge, 418 ft. above $\frac{1}{2}$ sec. cor. bears NW. and
 S. 40° E. Descend.
- 71.30 Leave sage and service berry and enter aspen bears N.
 and S.
- 74.41 Spring branch 2 lks. wide 1 in. deep in the bottom of a
 canyon 293 ft. below top of ridge, course S. 10° E.
 Ascend.
- 79.51 The cor. of secs. 26, 27, 34 and 35.
 Land mountainous.
 Soil stony 2nd and 3rd rate.
 Timber aspen; undergrowth sage, oak and service berry.
 This land is all mountainous and the slopes are too
 steep for cultivation. The soil on about 45 chs. of
 it is a black loam but quite stony; on the balance the
 soil is sandy and stony. It is all good grazing
 ground; and there are indications of coal on the backs
 of spurs and in the hollows.

September 15, 1911.

September 16, 1911: I begin at the cor. of secs. 26, 27,
 34 and 35. The weather being cloudy I am unable to
 get a solar observation.

Test on a random line bet. secs. 27 and 34.

80.00 Set temp. $\frac{1}{2}$ sec. cor.

81.94 Fall 2 lks. N. of the cor. to secs. 27, 28, 33 and 34.

There I run

S. 72° 30' E. on a true line bet. secs. 27 and 34.

21

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

Ascending through heavy aspen timber.

15.94 Leave heavy aspen entering scattering aspen and sage,
bears NW. and SE.

19.94 Leave scattering aspen and sagebrush bears NW. and SE.

21.04 Outcropping ledges bearing NW. and SE.

26.75 Top of barren ridge 498 ft. above sec. cor. bears N. 35°W.
and S. 35°E. Leave ledges bearing with ridge. Descend.

28.00 Enter aspen and pine timber bears NW. and SE.

30.40 A trail bears N. and S. 10°E.

34.65 A trail bears N. 35°W. and S. 35°E.

39.97 Set an iron post 1 in. diam., 3 ft. long, 26 ins. in the
ground for $\frac{1}{4}$ sec. cor. marked on the brass cap $\frac{1}{4}$ S 27
on N. half and S $\frac{3}{4}$ on S. half; from which

An aspen 8 ins. diam., bears N. 29°50'E.,

21 lks. dist. marked $\frac{1}{4}$ S 27 B T.

A pine 7 ins. diam., bears S. 17°20'W.,

127 lks. dist. marked $\frac{1}{4}$ S $\frac{3}{4}$ B T.

48.14 Leave aspen bears NE. and SW.

52.14 Top of spur projects N. 20°E. Top of spur on line is 118
ft. below top of ridge. Descend.

54.75 Enter heavy aspen bears N. and S.

62.30 Bottom of a gulch 185 ft. below top of spur, drains SW.
Ascend.

65.20 Leave aspen bears NE. and SW.

67.30 Top of ridge 10 ft. above bottom of gulch bears N. 35°E.
and S. 35°W. Descend.

69.25 Enter aspen timber bears N. 40°E. and S. 50°W.

79.94 The cor. of secs. 26, 27, 34 and 35.

Land mountainous.

Soil sandy loam and stony, 2nd and 4th rate.

Timber aspen and pine.

This line is all on mountainous land; 5.70 chs. are over
outcropping ledges and 10 chs. are very rocky. The
balance is sandy loam with considerable stone among it.
The land is all too steep for cultivation.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
	September 16th: It being cloudy I am unable to take a lat. observation.
	N.0°07'E. bet. secs. 26 and 27.
	Ascending through heavy aspen timber.
7.55	Spring branch 2 lks. wide 1 in. deep, course SE.
11.20	Leave aspen bears NE. and SW.
13.50	Top of a barren rocky ridge bears N.63°E. and S.40°W. The top of this ridge is 293 ft. above sec. cor. Descend.
16.70	Enter heavy aspen and scattering pine timber bears N.75° and S.75°W.
25.45	Spring branch 3 lks. wide 2 ins. deep in a draw 212 ft. below top of ridge, course N.80°E. Ascend along E. side of ridge.
29.75	Top of spur projects E. 3.50 chs. Descend.
31.30	Spring branch 2 lks. wide 1 in. deep in bottom of a draw, course S.75°E. Ascend.
39.45	Leave aspen and pines and enter dense sagebrush, bear E. and SW.
40.00	Set an iron post 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 27 on W. half and S 26 on E. half; from which An aspen 7 ins. diam., bears S.17°E., 77 lks. dist. marked $\frac{1}{4}$ S 26 B T. An aspen 6 ins. diam., bears S.37°30'W., 68 lks. dist. marked $\frac{1}{4}$ S 27 B T. This cor. is 217 ft. above spring branch.
43.25	Leave sagebrush bears E. and W. cross barren rocky land.
50.41	Top of a barren ridge 229 ft. above $\frac{1}{4}$ sec. cor., bears N.70°W. and S.80°E. Descend.
53.60	Enter heavy aspen timber bears E. and W.
61.25	A wash 8 lks. wide 3 ft. deep in bottom of a gulch 124 ft. below top of ridge drains E. Ascend.
66.00	Top of spur 27 ft. above wash, projects E. Descend.
70.65	Spring branch 2 lks. wide, 1 in. deep, runs NE.

SUBDIVISION OF T. 13 S. R. 7 E.

Chains

- 71.65 A point 54 ft. below top of spur.
- 72.05 Ascend 115 ft.
- 73.00 The center of a sheep corral 2 chs. wide N. and S. and 3 chs. long E. and W.
- 80.00 Set an iron post 2 ins. diam., 3 ft. long, 24 ins. in the ground for the cor. of secs. 22, 23, 26 and 27, marked on the brass cap
T 13 S S 22 in NW.
R 7 E S 23 in NE.
S 26 in SE. and
S 27 in SW. quadrant; from which
An aspen 14 ins. diam., bears N. 50° 40' W.,
12 lks. dist. marked T 13 S R 7 E S 22 B T.
An aspen 10 ins. diam., bears N. 25° 30' E.,
24 lks. dist. marked T 13 S R 7 E S 23 B T.
An aspen 7 ins. diam., bears S. 32° 20' E.,
52 lks. dist. marked T 13 S R 7 E S 26 B T.
An aspen 4 ins. diam., bears S. 31° 40' W.,
51 lks. dist. marked T 13 S R 7 E S 27 B T.

Land, mountainous.
Soil, stony 2nd and 3rd rate.
Timber, aspen and pine.
This line is all mountainous and 60 chs. of it heavily timbered. The slopes are too steep for cultivation. The soil is quite fertile although stony and grass grows luxuriantly on the slopes and furnishes good grazing lands.

September 16, 1911.

September 18, 1911: At the cor. of secs. 22, 23, 26 and 27, I set off 2° 11' N. on the decl. arc, 39° 40' on the lat. arc, and at 8h a.m., l.m.t., determine a meridian with the solar.

Thence I run N. 89° 45' E. on a random line bet. secs. 23 and 26.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.77 Fall 7 lks. N. of the cor. of secs. 23, 24, 25 and 26.
Thence I run
S. 79°45' W. on a true line bet. secs. 23 and 26.
Descending through heavy aspen and pine timber.
- 11.42 South fork of Gordon Creek, 3 lks. wide 2 ins. deep in
a wash 30 lks. wide 12 ft. deep in the bottom of a
canyon 140 ft. below the sec. cor., course N. 60° E.
Ascend.
- 14.22 Leave heavy aspen and pine and enter scattering aspen
and dense choke-cherry, bearing NE. and SW.
- 30.52 The N. edge of Gordon Creek. Creek bends and runs
S. 85° E.
- 39.885 Set an iron post 1 in. diam., 3 ft. long, 26 ins. in the
ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 23 on
N. half, and S 26 on S. half; from which
An aspen 14 ins. diam., bears S. 60° E.,
80 lks. dist. marked $\frac{1}{4}$ S 26 B T.
An aspen 8 ins. diam., bears S. 45° W.,
170 lks. dist. marked $\frac{1}{4}$ S 26 B T.
This cor. sets on the E. slope of a spur 297 ft. above
the S. fork of Gordon Creek.
- September 18: At this point I set off 2° 06' N. on the
decl. arc, and at 12h M., l.m.t., observe the sun on
the meridian; the resulting lat. is 39° 40'.
- 43.07 Top of spur 16 ft. above $\frac{1}{4}$ sec. cor., projects S. 10° E.
Descend along steep S. slope.
- 45.57 Bottom of a wash 2² lks. wide 8 ft. deep, 23 ft. below
top of spur, course S. 20° E.
Ascend along steep side hill sloping to S. and E.
- 47.37 Leave scattering aspen bear N. and S.
- 55.6 Top of spur 201 ft. above bottom of wash, projects S. 15° E.
Descend.
- 57.67 Enter heavy aspen bear NW. and SE.
- 61.47 A spring branch 1 lk. wide 1 in. deep runs S.
- 63.62 A spring branch 2 lks. wide 1 in. deep in the bottom of

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
	a gulch 30 ft. below top of spur, course S.20°E. Ascend.
79.77	The cor. of secs. 22, 23, 26 and 27, 226 ft. above bottom of gulch. Land mountainous. Soil, loam and stony, 1st and 3rd rate. Timber, aspen and pine; undergrowth choke-cherry. Mountainous land 79.77 chs, This line runs along the steep slopes of the South Fork of Gordon Creek. The soil is generally a rich black loam though there is a frequent outcropping of sandstone. It is too steep for cultivation, but the rich soil and abundant moisture cause the grass to grow luxuriantly, and the grazing is excellent. September 18, 1911.
	September 19: At the cor. of secs. 22, 23, 26 and 27, I set off 1°46' on the decl. arc, 39°40' on the lat. arc, and at 9h a.m., l.m.t., determine a meridian with my solar. Thence I run S.89°58'W. on a random line bet. secs. 22 and 27.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.14	Intersect a N. and S. line 16 lks. N. of the cor. of secs. 21, 22, 27 and 28. Thence I run N.89°51'E. on a true line bet. secs. 22 and 27. Descending through heavy aspen and pine timber.
8.39	A gulch 117 ft. below sec. cor., bears N.15°W. Ascend.
33.89	Leave heavy timber and enter scattering aspen and pine, bears N. and S.
39.14	The top of a ridge 512 ft. above bottom of gulch, bears N.40°E. and S.40°W. Descend.
40.07	7 ft. below top of ridge, I set an iron post, 1 in. in diam.

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SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
	3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on the brass cap $\frac{1}{4}$ S 22 on N. half and S 27 on S. half; from which
	An aspen 8 ins. diam., bears N. 48° 38' W., 150 lks. dist. marked $\frac{1}{4}$ S 22 B T.
	An aspen 8 ins. diam., bears S. 71° 34' W., 121 lks. dist. marked $\frac{1}{4}$ S 27 B T.
40.70	A trail bears N. 10° E. and S.
51.45	A wash 15 lks. wide 8 ft. deep; 147 ft. below $\frac{1}{4}$ sec. cor. drains NE. Ascend.
67.70	Leave aspen and pine bears N. and S.
74.15	Top of a barren, rocky ridge 230 ft. above bottom of wash bears NE. and SW. Descend along N. edge of heavy aspen and pine timber.
80.14	The cor. of secs. 22, 23, 26 and 27, 59 ft. below top of ridge. Land mountainous. Soil, loam and stony, 1st. and 3rd rate. Timber, aspen and pine. Mountainous land 80.14 chs. The land along this line is too steep for cultivation. The soil is black loam with outcropping sandstone. It affords excellent grazing.
September 19th, 1911: At the cor. of secs. 22, 23, 26 and 27, I set off 1° 43' 21" on the decl. arc, and at 11h 54m a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39° 40'.	
	Thence I run N. 0° 7' E., bet. secs. 22 and 23. Ascending over barren, rocky land.
4.90	Top of rocky ridge 63 ft. above sec. cor., bears N. 50° E. and S. 50° W. Descend.
16.00	Enter dense aspen and pine timber bears E. and SW.

SUBDIVISION OF T. 15 S. R. 7 E.

Chains

- 32.45 A wash 4 lks. wide and 4 ft. deep in bottom of canyon 477 ft. deep, drains N.60°W. into a branch of Gordon Creek. Ascend.
- 33.50 Point of spur, projects N.60°W., 4 chs. Descend.
- 37.95 A branch of Gordon Creek 3 lks. wide, 3 ins. deep, in the bottom of a canyon 525 ft. below top of ridge, course NE. Ascend.
- 40.00 Set an iron post, 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 22 on W. half and S 23 on E. half, from which
 - An aspen, 6 ins. diam., bears S.21°35'W.,
 - 19 lks. dist. marked $\frac{1}{4}$ S 22 B T.
 - An aspen 6 ins. diam., bears N.11°E.,
 - 17 lks. dist. marked $\frac{1}{4}$ S 23 B T.

September 19, 1911.

Robert E. Collier

U.S. Transitman.

September 22, 1911: At the $\frac{1}{4}$ sec. cor. of secs. 22 and 23, I set off 39°40'15" on the lat. arc, 0°37.5' N on the decl. arc, and at 8h a.m., l.m.t., determine a meridian with the solar.

Thence I continue on Transitman Collier's line

N.0°07'E. bet. secs. 22 and 23.

- 57.50 Top of a spur 120-ft. high, projects NE. Descend.
- 60.85 An old wagon road bears NE. and SW.
- 65.05 A wash 5 lks. wide 2 ft. deep in the bottom of a gulch 131 ft. below top of spur, drains S.80°E. Ascend.
- 72.95 A spring branch 1 lk. wide 2 ins. deep in the bottom of a small draw, course S.80°E.
- 80.00 218 ft. above the bottom of wash, I set an iron post, 2 ins. diam., 3 ft. long, 24 ins. in the ground for cor. of secs. 14, 15, 22 and 23, marked on brass cap

T 13 S S 15 in NW.

R 7 E S 14 in NE.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

S 23 in SE. and

S 22 in SW. quadrant; from which

An aspen 6 ins. diam., bears N. 48° 45' W.,

45 lks. dist. marked T 13 S R 7 E S 15 B T.

An aspen 6 ins. diam., bears N. 18° 50' E.,

62 lks. dist. marked T 13 S R 7 E S 14 B T.

An aspen 10 ins. diam., bears S. 57° 20' E.,

44 lks. dist. marked T 13 S R 7 E S 23 B T.

An aspen 12 ins. diam., bears S. 72° W.,

22 lks. dist. marked T 13 S R 7 E S 22 B T.

Land mountainous.

Soil, loam and stony, 1st and 4th rate.

Timber, aspen and pine.

Mountainous land 80.00 chs.

This line is along the steep slopes at the head of Gordon Creek. It is too steep for cultivation. The soil, except on the ridges, is quite rich and the grazing good.

September 22, 1911: At this cor. I set off 0° 33' N. on the decl. arc, and at 11h 53m a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39° 41'.

N. 89° 48' E. on a random line bet. secs. 14 and 23.

40.00 Set temp. 1/4 sec. cor.

79.71 Intersect N. and S. line 20 lks. N. of the cor. of secs. 13, 14, 23 and 24. Thence I run

S. 89° 57' W. on a true line bet. secs. 14 and 23.

Along steep S. slope.

5.47 A spur projects S. 20° W.

Descend.

9.47 Enter dense oak and scattering aspen bears N. and SW.

10.67 Wash 5 lks. wide, 3 ft. deep, course S. 50° W.

September 22, 1911.

September 23: An overcast sky prevents observations.

19.07 Bottom of hollow, 300 ft. below top of spur, drains S.

Leave oak, enter heavy aspen and dense choke-cherry,

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
	bearing N. and S. Ascend.
29.52	Leave aspen and choke-cherry.
31.22	Point on S. slope of ridge, 435 ft. above bottom of hollow. Descend.
37.72	Enter dense choke-cherry and service berry brush, bearing N. and S.
39.47	Bottom of draw, draining S.
39.855	Set an iron post 3 ft. long, 1 in. dia., 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 14 on N. half and S 23 on S. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable. The $\frac{1}{4}$ sec. cor. is 265 ft. below sec. cor.
51.72	Spur, 117 ft. above $\frac{1}{4}$ sec. cor.; projects south. Descend; leave choke-cherry and service berry, bearing N. and S.
63.22	Enter heavy aspen, bearing N. and S.
65.12	Gordon Creek, 3 lks. wide, 2 ins. deep in bottom of a hollow 264 ft. below top of spur, course S.10°E. Ascend.
79.71	The cor. of secs. 14, 15, 22 and 23. Land, mountainous. Soil, stony, 3rd rate. Timber, aspen. Undergrowth, choke-cherry, service berry and oak. Mountainous land 79.71 chs. This land is too steep for cultivation; and the soil is quite stony. It affords good grazing land.

September 23, 1911,

George C. Swan
U.S. Transitman.

September 28, 1911: At the cor. of secs. 14, 15, 22 and
23, I set off 1°47.5'S. on the decl. arc, and at 11h
51m a.m., l.m.t., observe the sun on the meridian; the

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

resulting lat. is 39°41'.

Thence I run

S. 89°51' W. on a random line bet. secs. 15 and 22.

40.00 Set temp. 1/4 sec. cor.

80.24 Fall 5 lks. S. of the cor. of secs. 15, 16, 21 and 22.

Thence I run

N. 89°53' E. on a true line bet. secs. 15 and 22.

Ascending through dense sagebrush.

4.84 A wash 10 lks. wide 3 ft. deep, drains SW.

32.24 Top of a spur, 393 ft. above sec. cor., projects south, enter dense choke-cherry bears N. and S.

Descend.

36.52 Leave choke-cherry and sagebrush, enter heavy aspen timber bears N. and S.

40.12 Set an iron post, 1 in. diam., 3 ft. long, 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 1/4 S 15 on N. half S 22 on S. half; from which

An aspen 8 ins. diam., bears N. 56°15' E.,

30 lks. dist. marked 1/4 S 15 B T.

An aspen 6 ins. diam., bears S. 25°35' W.,

15 lks. dist. marked 1/4 S 22 B T.

Ascend.

51.64 Leave aspen bear NW. and SE.

62.49 Enter aspen bear N. and S.

63.74 Top of ridge, 300 ft. above spur, bears N. and S.

Descend.

80.24 The cor. of secs. 14, 15, 22 and 23, 204 ft. below top of ridge.

Land, mountainous.

Soil stony, 2nd and 3rd rate.

Timber, aspen; undergrowth sage and choke-cherry.

Mountainous land 80.24 chs.

This land is quite steep and the soil stony. It affords good grazing, but is not adapted to cultivation. The ridge widens out to the North and there is a considerable tract of quite level land which might be culti-

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

vated, though parts of it are too stony to be of much value.

September 28: At this cor. I set off 39°41' on the lat. arc, 1°50.5'S. on the decl. arc, and at 4h p.m., l.m.t., determine a meridian with the solar.

September 28, 1911

Robert E. L. Collead

U.S. Transitman.

September 25: The sky being overcast, observations are impossible.

N. 0°07'E. bet. secs. 14 and 15.

Ascending through heavy aspen timber.

2.50 Top of spur, 42 ft. above sec. cor., projects E.

Descend.

13.25 A dry wash, 20 lks. wide 8 ft. deep, in the bottom of a hollow 138 ft. below the top of spur, drains E.

Ascend.

20.75 The top of a spur, 131 ft. high, projects E.

Descend.

26.25 A dry wash, 40 lks. wide 12 ft. deep, in a hollow 26 ft. deep, drains S. 80°E. Ascend:

36.25 Top of a spur, 192 ft. above wash, projects SE.

Descend.

40.00 Set an iron post, 1 in. diam.; 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ S 15 in W. half, S. 14 in E. half, from which

An aspen 5 ins. diam., bears S. 51°30'E.,

19 lks. dist. marked $\frac{1}{4}$ S 14 B T.

An aspen, 7 ins. diam., bears S. 45°W.,

19 lks. dist. marked $\frac{1}{4}$ S 15 B T.

43.00 A spring branch 5 lks. wide 1 in. deep, course N. 60°E.

46.25 The bottom of a hollow 40 ft. deep, drains S. 80°E.

Ascend.

52.50 Top of a spur 60 ft. high, projects N. 75°W.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

Descend.

58.75 Bottom of a hollow 87 ft. deep, drains N.80°E.
Ascend.

64.00 Top of a spur and center of a sheep corral 12 chs. diam.,
40 ft. above bottom of hollow. Spur projects N.65°E.
Descend.

70.70 Wagon road from Price to Scofield bears N.70°E. and S.
80°W.

71.45 A wash 10 lks. wide 2 ft. deep in Beaver Canyon, 80 ft.
below top of spur, course E.
Ascend.

75.43 Wagon road bears S.20°W. and N.15°E.

80.00 On the top of the saddle bet. Beaver and Lake Creek canyon
Set an iron post 2 ins. diam., 3 ft. long, 24 ins. in the
ground for the cor. of secs. 10, 11, 14 and 15, marked
on brass cap

T 13 S S 10 in NW.
R 7 E S 11 in NE.
S 14 in SE. and
S 15 in SW. quadrant; from which

An aspen 5 ins. diam., bears N.34°15'W.,
344 lks. dist. marked T 13 S R 7 E S 10 B T.

An aspen 5 ins. diam., bears N.69°15'E.,
341 lks. dist. marked T 13 S R 7 E S 11 B T.

An aspen 10 ins. diam., bears S.59°20'E.,
185 lks. dist. marked T 13 S R 7 E S 14 B T.

An aspen 12 ins. diam., bears S.38°40'W.,
261 lks. dist. marked T 13 S R 7 E S 15 B T.

Land, mountainous.

Soil, stony and loam, 3rd and 1st rate.

Timber, aspen.

Mountainous and heavily timbered land 80 cha.

This line runs from the head of Gordon Creek across the
head of Beaver Creek to the head of Lake Creek, along
the east side of a flat topped mountain. The land to
the east is steep and broken. On the ridge to the west

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

there are about 50 acres of quite level land; though much of it is quite stony. At this altitude the seasons are short but some of the hardy crops might be raised here.

September 25: Clouds prevent my taking a lat. observation.

N. 89°57'E. on a random line bet. secs. 11 and 14.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.74 Fall 19 lks. N. of the cor. of secs. 11, 12, 13 and 14. Thence I run

N. 89°55'W. on a true line bet. secs. 11 and 14.

Along the steep S. side of Beaver Canyon through heavy aspen and pine timber.

9.65 Wagon road from Price to Scofield bears N. 80°E. and S. 80°W. Leave pines, bear with wagon road.

11.10 Wash 10 lks. wide, 3 ft. deep in the bottom of canyon, course N. 75°E. Ascend.

39.87 Set an iron post, 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on the brass cap $\frac{1}{4}$ S 11 on N. half and S 14 on S. half; from which

An aspen 6 ins. diam., bears N. 16°40'W.,

38 lks. dist. marked $\frac{1}{4}$ S 11 B T.

An aspen 4 ins. diam., bears S. 11°E.,

29 lks. dist. marked $\frac{1}{4}$ S 14 B T.

This cor. is 265 ft. above sec. cor.

Thence along broken N. side of canyon.

54.34 Leave aspen and enter dense sagebrush bearing NE. and SW.

68.74 Leave sagebrush and enter heavy aspen timber, bears N. and S. At this point begins the saddle of divide bet. Beaver and Lake Creeks.

78.24 Wagon road from Price to Scofield bears N. 10°E. and S. 20°W.

79.74 The cor. of secs. 10, 11, 14 and 15, 110 ft. above $\frac{1}{4}$ sec. cor.

Land, mountainous.

Soil, loam and stony, 2nd and 3rd rate.

Timber, aspen and pine.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

Mountainous and heavily timbered land 79.74 chs.

With the exception of about 5 acres on the saddle at the west end of this line, the land along the line is not adapted to cultivation; being very steep. The grazing is good.

September 25, 1911.

October 3, 1911: At the cor. of secs. 10, 11, 14 and 15 I set off $3^{\circ}40'5''$ S. on the decl. arc, $39^{\circ}42'$ on the lat. arc, and at 9h a.m., l.m.t., determine a meridian with the solar.

Thence I run

S. $89^{\circ}53'W$. on a random line bet. secs. 10 and 15.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.50 Fall 27 lks. S. of the cor; of secs. 9, 10, 15 and 16.

Thence I run

S. $89^{\circ}55'E$. on a true line bet. secs. 10 and 15.

Descending through scattering bunches of aspen timber.

11.72 A trail in the bottom of a hollow, 189 ft. below sec. cor., bears N. and S. Ascend.

19.34 Top of a spur, 57 ft. above bottom of hollow, projects SE. Descend.

24.84 A spring branch 1 lk. wide 1 in. deep in the bottom of a hollow 112 ft. below top of spur, course N. $15^{\circ}E$. Ascend.

40.25 Set an iron post, 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 10 in N. half S. 15 in S. half, from which

An aspen 6 ins. diam., bears N. $71^{\circ}03'W$.,

61 lks. dist. marked $\frac{1}{4}$ S 10 B T.

An aspen 8 ins. diam., bears S. $17^{\circ}15'E$.,

162 lks. dist. marked $\frac{1}{4}$ S 15 B T.

This cor. is on a side hill 325 ft. above the bottom of hollow.

48.24 Leave aspen, enter sagebrush, bear N. and S.

SUBDIVISIONS OF T. 13 S. R. 7 E.

- 54.54 Enter heavy aspen and pine timber, bears N. and S.
- 63.29 A trail on the top of ridge, 2255 ft. above $\frac{1}{4}$ sec. cor., bears N. and S. Descend.
- 71.04 A spring branch 1 lk. wide 1 in. deep, in the bottom of a hollow 111 ft. below the top of ridge, course N. Ascend.
- 80.50 The cor. of secs. 10, 11, 14 and 15, 45 ft. above spring branch.
Land mountainous.
Soil loam and stony, 1st and 3rd rate.
Timber aspen and pine.
Mountainous land 80:50 chs.
October 3rd: At the time for lat. observation I was on my way to the cor. of secs. 2, 3, 10 and 11 and failed to get an observation.
-
- September 26, 1911: At the cor. of secs. 10, 11, 14 and 15 I set off 1°43.5'S. on the decl. arc, 39°42' on the lat. arc, and at 8h 15m a.m., l.m.t., determine a meridian with the solar.
Thence I run
N.0°01'W. bet. secs. 10 and 11.
Descending through heavy aspen and pine timber.
- 24.62 A trail bears NE. and S.30°W.
- 25.10 A spring branch 4 lks. wide, 1 in. deep, in the bottom of a hollow 204 ft. below sec. cor., course NW.
Ascend.
- 35.50 Top of spur 71 ft. above bottom of hollow projects N.60°E. 10 chs. Descend.
- 40.00 Set an iron post 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on the brass cap $\frac{1}{4}$ S 10 on W. half, S 11 on E. half; from which
A pine 24 ins. diam., bears N.83°W.,
91 lks. dist. marked $\frac{1}{4}$ S 10 E T.
A balsam 18 ins. diam., bears N.65°E.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
53.50	<p>40 lks. dist. marked $\frac{1}{4}$ S. 11 B T.</p> <p>Leave heavy aspen and pine and enter scattering aspen, bear E. and W. in the bottom of a hollow 112 ft. below top of spur, drains E.</p> <p>Ascend.</p>
80.00	<p>Set an iron post, 2 ins. diam., 3 ft. long, 24 ins. in the ground for cor. of secs. 2, 3, 10 and 11, marked on brass cap</p> <p>T 13 S S 3 in NW.</p> <p>R 7 E S 2 in NE.</p> <p>S 11 in SE. and</p> <p>S 10 in SW. quadrant; from which</p> <p>An aspen 12 ins. diam., bears N. 16° W.,</p> <p>120 lks. dist. marked T 13 S R 7 E S 3 B T.</p> <p>An aspen 12 ins. diam., bears N. 36° 20' E.,</p> <p>248 lks. dist. marked T 13 S R 7 E S 2 B T.</p> <p>An aspen 6 ins. diam., bears S. 41° 50' E.,</p> <p>85 lks. dist. marked T 13 S R 7 E S 11 B T.</p> <p>An aspen 6 ins. diam., bears S. 73° 40' W.,</p> <p>124 lks. dist. marked T 13 S R 7 E S 10 B T.</p>
	<p>This cor. sets on a SE. slope 182 ft. above the bottom of the hollow.</p>
	<p>Land mountainous.</p>
	<p>Soil loam and stony, 1st and 3rd rate.</p>
	<p>Timber aspen and pine.</p>
	<p>Mountainous land 80.00 chs.</p>
	<p>The slopes along this line are quite steep and could not be cultivated to advantage.</p>
	<p>September 28: At this cor. I set off 1° 47.5' S. on the decl. arc, and at 11h 51m a.m., l.m.t., I observe the sun on the meridian; the resulting lat. is 39° 42.5' which is within one minute of the calculated lat.</p>
40.00	<p>S. 89° 55' E. on a random line bet. secs. 2 and 11.</p> <p>Set temp. $\frac{1}{4}$ sec. cor.</p>

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains	
79.72	Fall 14 lks. S. of the cor. of secs. 1, 2, 11 and 12.
	Thence I run
	S. 89°59'W. on a true line bet. secs. 2 and 11.
	Ascending through heavy aspen timber.
3.22	Leave aspens, bear NW. and SE.
4.72	Top of a spur projects SE.
	Descend.
7.22	Enter aspen, bear NW. and SE.
14.72	Bottom of a hollow 31 ft. below top of spur, drains SE.
	Ascend.
23.42	Leave aspen and enter sagebrush bears N. and S.
	Sandstone ledges bear N. and SE.
25.22	Top of ridge 165 ft. above bottom of hollow, bears NW.
	and SE. Descend.
26.72	Leave sandstone ledges, bear N. and SW.
36.37	Enter heavy aspen and leave sagebrush, bear N. and S.
39.86	Set an iron post, 1 in. diam. 3 ft. long, 26 ins. in the
	ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 2 on N.
	half and S 11 on S. half; from which
	An aspen 6 ins. diam., bears N. 3°45'W.,
	26 lks. dist. marked $\frac{1}{4}$ S 2 B T.
	An aspen 5 ins. diam., bears S. 24°30'E.,
	27 lks. dist. marked $\frac{1}{4}$ S 11 B T.
	This cor. is on the west slope of the ridge 191 ft. below
	the top.
55.22	Leave heavy aspen and enter scattering aspen and heavy
	sagebrush, bear N. and S.
59.67	Wagon road from Price to Scofield bears N. 15°E. and S. 15°W.
60.12	A wash 3 lks. wide and 18 ins. deep in the bottom of Lake
	Creek canyon 335 ft. below $\frac{1}{4}$ sec. cor., course N.
	Ascend.
79.72	The cor. of secs. 2, 3, 10 and 11, 217 ft. above the
	bottom of the canyon.
	Land mountainous.
	Loam and stony soil, 1st and 4th rate.
	Timber aspen; undergrowth sagebrush and choke cherry.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

Mountainous land 79.72 chs.

The slopes along this line are quite steep and unsuited to cultivation. In the Lake Creek Canyon there are places N. and S. of this line where the canyon widens out and some land suited to cultivation could be found. The mountains furnish good grazing during the summer season.

From the cor. of secs. 2, 3, 10 and 11, I run N. 89°55'W. on a random line bet. secs. 3 and 10.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.50 Fall 16 lks. north of the cor. of secs. 3, 4, 9 and 10.

Thence I run

N. 89°58'E. on a true line bet. secs. 3 and 10.

Descending through heavy aspen timber and dense choke-cherry undergrowth.

23.30 Bottom of a hollow about 420 ft. below sec. cor., drains

N. 25°E. Leave choke cherry bears with hollow.

At this point I set a temp. mark and discontinue work for the day.

October 3, 1911.

October 4: I set up at the temp. mark established by me yesterday and continue my line.

Ascend.

28.80 Top of a spur, 123 ft. above bottom of hollow, projects

N. 20°E. Descend.

32.60 Leave aspen bear N. and S.

35.75 A spring branch 3 lks. wide, 2 ins. deep, in the bottom of a canyon 117 ft. below top of spur, course N.

Ascend.

36.80 A trail bears N. and S. Enter aspen bearing with trail.

40.25 Set an iron post 1 in. diam., 3 ft. long, 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on the brass cap $\frac{1}{4}$ S 3 in N. half S 10 in S. half; from which

: An aspen 4 ins. diam., bears N. 76°30'W.,

15 lks. dist. marked $\frac{1}{4}$ S 3 B T.

An aspen 4 ins. diam., bears S. 51°20'W.,

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

20 lks. dist. marked $\frac{1}{4}$ S 10 B T.

October 4: At this cor. I set off 4°05'S. on the decl. arc, 39°42.5' on the lat. arc; and at 10h a.m., l.m.t. determined a meridian with the solar.

41.30 Leave aspen bears N. and S.

72.30 Enter aspen bears N. and S.

Over rolling land gradually ascending.

80.50 The cor. of secs. 2, 3, 10 and 11, 734 ft. above bottom of hollow.

October 4: At this cor. I set off 4°07'S. on the decl. arc, and at 11h 50m a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39°42.5'.

Land mountainous.

Soil loam and stony; 2nd and 3rd rate.

Timber aspen; undergrowth choke cherry and sagebrush.

Mountainous land 72.30 chs.

October 4, 1911.

Sept. 30: At the cor. of secs. 2, 3, 10 and 11 I set off 39°43' on the lat. arc, 2°36'S. on the decl. arc. and at 2h p.m., l.m.t., determine a meridian with my solar.

Thence I run

N. 0°11'E. bet. secs. 2 and 3.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.03 Intersect the N. bdy. of Tp. 59 lks. E. of the old cor. of secs. 2, 3, 34 and 35 which is a sandstone 14x11x4 ins. above ground marked as described by the Surveyor General. No witness trees can be found.

In place of the stone I set an iron post, 3 ins. diam., 3 ft. long 26 ins. in the ground for the cor. of secs. 34 and 35, T. 12 S. R. 7 E., marked on the brass cap
T 12 S S 34 in NW.

R 7 E S 35 in NE. quadrant; from which

An aspen 12 ins. diam., bears N. 54°40' W.,

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

- 139 lks. dist. marked T 12 S R 7 E S 34 B T
 An aspen 12 ins. diam., bears N. 65° 50' E.,
 42 lks. dist. marked T 12 S R 7 E S 35 B T.
 At my intersection with the Tp. line N. 89° 58' E., 59 lks.
 dist. from the above described cor. of secs. 34 and 35.
 I set an iron post, 2 ins. diam., 3 ft. long, 26 ins. in
 the ground for the closing cor. of secs. 2 and 3; marked
 on brass cap
 T 12 S R 7 E S 34 and S 35 in N. half,
 T 13 S S 3 in SW. and
 R 7 E S 2 in SE. quadrant; from which
 An aspen 8 ins. diam., bears S. 52° E.,
 80 lks. dist. marked T 13 S R 7 E S 2 CC B T.
 An aspen 6 ins. dia., bears S. 36° W.,
 38 lks. dist. marked T 13 S R 7 E S 3 CC B T.
 Thence I run
 S. 0° 11' W. on a true line bet. secs. 2 and 3.
 Over rolling ground on top of ridge bet. Lake Creek and
 a branch of Pleasant Valley, through scattering aspen
 timber.
- 5.25 Enter heavy aspen, bear NE. and W.
- 39.03 Set an iron post, 1 in. diam., 3 ft. long, 26 ins. in the
 ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 3 in
 W. half and S 2 in E. half; from which
 An aspen 12 ins. diam., bears S. 86° E.,
 71 lks. dist. marked $\frac{1}{4}$ S 2 B T.
 An aspen 7 ins. diam., bears N. 89° W.,
 24 lks. dist. marked $\frac{1}{4}$ S 3 B T
 This cor. although mkd. for two secs. refers only to sec. 2.
- 39.53 Leave heavy enter scattering aspen, bear E. and W.
 Begin descent.
- 63.03 Head of a hollow, 106 ft. below $\frac{1}{4}$ sec. cor., drains S. 70° E.
 Ascend.
- 74.03 Top of a spur, 97 ft. above bottom of hollow, projects E.
 Descend.
- 79.03 The cor. of secs. 2, 3, 10 and 11, 107 ft. below top of
 spur.

SUBDIVISIONS OF T. 13 S. R. 7 E.

Chains

Land mountainous.

Soil loam, 1st rate.

Timber aspen.

Mountainous and heavily timbered land 73.78 chs.

This line follows along the top of the ridge, bet.

Pleasant Valley and Lake Creek for the first half mile and then as the ridge makes a slight turn to the west runs along the east side of the ridge. There is on the top of this ridge about 64 acres of land which can be cultivated. This land could not be irrigated, but the winters are long; here and there is ample moisture to raise most any crop which will mature. Only the most hardy crops could be grown as the summers are quite short at this altitude.

September 30, 1911.

George C. Brown U.S. Transitman.

GENERAL DESCRIPTION

The eastern half of this township, which is the portion that is included in this survey, is all mountainous and rough and especially is this the case on the south and east. Through the western range of sections runs a high divide which separates the Pleasant Valley from Gordon, Beaver and Lake Creeks, and connected with this ridge and running eastward from it are high divides forming the watershed between the creeks to the east. All of the streams mentioned and most of their tributaries have cut very deep canyons in the sandstone which is almost the only rock to be found in this region.

The soil is not deep as a general rule, owing to the steep slopes. In the southeastern portion there is almost no soil except that which is held between the ledges of sandstone. The little soil that is thus held, however, supports a heavy growth of grass on which sheep and cattle graze during the summer.

GENERAL DESCRIPTION

There is very little land embraced in this survey which can be cultivated and the little there is being at such an altitude that the summer season is too short for any but the most hardy crops.

In the southern portion of the township are many indications of coal. Indications of a number of seams can be found on nearly every ridge and spur as well as in the bottom of hollows where the soil has been washed away. There is still considerable timber among these mountains, though a great deal of the best timber has been cut for mining timber and ties. Aspen is to be found in all portions of the township and some is now being used for mining timbers. Most of the aspen here is too small to be of any value at present. The pine timber is found mostly on the slopes facing north and while in some places there has been considerable cutting there is still considerable good timber left.

There are no settlers in this township.

Robert E. A. Collier

U.S. Transitman.

George C. Swann

U.S. Transitman.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

Survey commenced November 30, 1914 and executed with a Young and Sons light mountain transit No. 8517, with solar attachment. The horizontal limb is provided with two double verniers, placed opposite to each other and reading to single minutes of arc, which is also the least count of the verniers of the lat. and decl. arcs.

The instrument was approved for use in this survey by G. D. D. Kirkpatrick, Assistant Supervisor of Surveys.

I examine the adjustments of the transit and correct the level and collimation errors. The sky being overcast on the nights of Nov. 28 and 29, I was unable to make an observation on Polaris so that the meridians determined with the solar could be tested with a Polaris meridian, test of instrument made December 6, description of test is recorded in notes at end of survey of this bdy.

A steel tape, 5 chs. long, was used in the field work of this survey, together with a clinometer for determining slope angles, and the reduced horizontal distances only appear in the official field notes. The tape was tested before the commencement of the survey, comparison being made with a standard tape, 1 chain long, kept and used for that purpose.

 In the declination arc settings, .75 of the tabulated refraction, for computing declinations, is used in the survey of this boundary, due to the altitude of the country which is approximately 8000 ft.

I begin at the cor. of secs. 7, 12, 13 and 18 on the W. bdy. of the tp., which is a sandstone, 11 x 11 x 4 ins. above ground, firmly set, marked with 2 notches on N. and 4 notches on S. edge,
 from which

An aspen, 10 ins. diam., bears N. $31\frac{1}{2}^{\circ}$ E., 47 lks.

dist., marked T 13 S R 8 E S 7 B T

Re-survey of the W. bdy. of T.13 S., R.8 E

chains

An aspen , 8 ins. diam., bears S.13³/₄°E., 116 lks. dist., marked T 13 S R 8 E S 18 B T

(I identify this as being the original cor. of secs. 7 , 12 , 13 and 18 as set by Mr. Breckon , U. S. Deputy Surveyor , having retraced the W. ¹/₂ mile bet. secs. 7 and 18 , T.13 S., R.8 E., and finding the topography and conditions to agree with those set forth in the original field notes)

Nov. 30: At this cor., I set off 39° 42' N., on the lat arc ; 21° 31' S., on the decl. arc ; and at 8 h. 30 m. a. m. apparent time determine a meridian with the solar.

Thence I run

North , retracing on the W. bdy. of sec. 7

8.11 Intersect the ¹/₄ sec. cor. on the E. bdy. of sec. 12 , T.13 S., R.7 E., set by Messrs. Collier and Swan , U. S. Transitmen. I destroy this cor.

40.00 After a long and careful search , I am unable to find any trace of the ¹/₄ sec. cor. I therefore continue my line North.

48.11 Intersect the cor. of secs. 1 and 12 on the E. bdy. of T.13 S., R. 7 E., set by Messrs. Collier and Swan , U. S. Transitmen. I destroy this cor.

80.00 After a long and careful search , I am unable to find any trace of the cor. of secs. 1 , 6 , 7 and 12.

87.83 W. 3 lks. from my line is the ¹/₄ sec. cor. on the E. bdy. of sec. 1 , T.13 S., R.7 E. as set by Messrs. Collier and Swan , U. S. Transitmen. I destroy this cor.

120.00 After a long and careful search , I am unable to find any trace of the ¹/₄ sec. cor.

126.76 Intersect the cor. of Tps. 12 and 13 S., R. 7 E., which is a sandstone , firmly set in a mound of stone , 8 x 14 x 10 ins. above the mound , marked with 6 notches on NW., 6 notches on NE. and 6 notches on SW. edge , from which

An aspen , 7 ins. diam., bears S.46° W., 35 lks.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

dist., marked T 13 S R 7 E S 1 B T

An aspen , 5 ins. diam., bears N.30 $\frac{1}{2}$ °W., 40 lks.

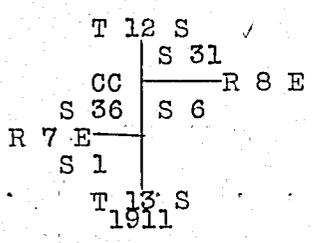
dist., marked T 12 S R 7 E S 36 B T

From Tp cor., I continue

North , with continuous chaining

157.84

Fall 44 lks. W. of the Closing cor. of Tps.12 and 13 S., R.8 E., which is an iron post , 3 ins. in dia., 12 ins. above ground , firmly set , marked on brass cap



from which

An aspen , 6 ins. diam., bears N.3 $\frac{1}{2}$ °E., 9 lks.

dist., marked T 12 S R 8 E S 31 B T

An aspen , 6 ins. diam., bears S.21°10'E., 33 lks.

dist., marked T 13 S R 8 E S 6 B T.

Note: The old Tp cor. which is a sandstone , 20 x 12 x 7 ins. lies alongside post.

The course of the line bet. the cor. of secs. 7 , 12 , 13 and 18 and the cor. of Tps. 12 and 13 S., R. 7 E., is North ; and bet. the cor. of Tps. 12 and 13 S., R.7 E. and the Closing cor. of Tps. 12 and 13 S., R. 8 E. is N.0°49'E. The distance bet. the cor. of secs. 7 , 12 , 13 and 18 and the Closing cor. of Tps. 12 and 13 S., R. 8 E., is 157.84 chs.; I will re-survey this line bet. said cors.setting the proper $\frac{1}{4}$ sec. and sec. cors. for R.8 E. at proportionate distanced.

November 30 , 1914

December 1 : At 8 h. 25 m. a. m. apparent time I set off 39° 42' on the lat. arc ; 21° 42' S., on the decl. arc ; and determine a meridian with the solar at the cor. of

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

sec. 7 , 12 , 13 and 18.

Thence I run

S.0° 04'W., retracing on the W. bdy. of sec. 18

31.89 W. 4 lks. from my line is the cor. of secs. 12 and 13 on the E. bdy. of T.13 S., R.7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

40.00 After a long and careful search , I am unable to find any trace of the old 1/2 sec. cor. I therefore continue my line

S.0° 04' W.

71.96 W. 15 lks. from my line is the 1/2 sec. cor. on the E. bdy. of sec. 13 , T.13 S., R. 7 E. set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

80.00 After a long and careful search , I am unable to find any trace of the cor. of secs. 13 , 18 , 19 and 24.

111.75 W. 28 lks. from my line is the cor. of secs. 13 and 24 on the E. bdy. of T.13 S., R. 7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

120.00 After a long and careful search , I am unable to find any trace of the 1/2 sec, cor.

December 1 : At this station I set off 21° 45' S., on the decl. arc ; and at apparent noon observe the sun on the meridian ; the resulting lat. is 39° 41'.

151.89 W. 25 lks. from my line is the 1/2 sec. cor. on the E. bdy sec. 24 , T.13 S., R. 7 E. set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

160.00 After a long and careful search , I am unable to find any trace of the cor of secs. 19 , 24 , 25 and 30.

December 1 , 1914.

December 2 : The sky is overcast all day , solar observations are impossible. By a backsight along my line to the North , I continue

S.0°04'W., retracing on the W. bdy. of T.13 S., R.8 E

Re-survey of the W. bdy. of T.13 S., R. 8 E.

chains

191.89 West 24 lks. from my line is the cor. of secs. 24 and 25 on the E. bdy. of T.13 S., R.7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

200.00 After a long and careful search I am unable to find any trace of the old $\frac{1}{2}$ sec. cor.

231.69 West 29 lks. from my line is the $\frac{1}{2}$ sec. cor. on the E. bdy. sec. 25 , T.13 S., R. 7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

240.00 After a long and careful search , I am unable to find any trace of the cor. of secs. 25 , 30 , 31 and 36.

271.69 West 34 lks. from my line is the cor. of secs. 25 and 36 on the E. bdy. of T. 13 S.,R.7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

280.00 After a long and careful search , I am unable to find any trace of the old $\frac{1}{2}$ sec. cor.

December 2 , 1914.

December 3: Intermittent storms of snow and dense fog prevent work this day.

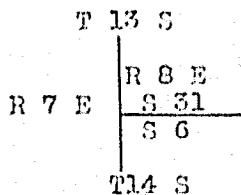
December 4 : At 9 h. 30 m. a. m. apparent time , I set off $39^{\circ} 39'$ on the lat. arc ; $22^{\circ} 10'$ S., on the decl. arc ; and determine a meridian with the solar.

Thence I run

$S.0^{\circ}04'W.$, retracing W. bdy. T.13 S., R. 8 E.

312.10 West 66 lks. from my line is the $\frac{1}{2}$ sec. cor. on the E. bdy. sec. 36 , T.13 S., R.7 E., set by Messrs Collier and Swan , U. S. Transitmen. I destroy this cor.

320.24 Fall 40 lks. E. of the cor. of Tps. 13 and 14 S., R. 8 E., which is an iron post , 3 ins. in dia., 12 ins. above ground firmly set , marked on brass cap



and witnessed by a mound of stone , 2 ft. base , $1\frac{1}{2}$ ft. high , E. of cor.

-74-

Re-survey of the W. bdy. of T.13 S., R.8 E.

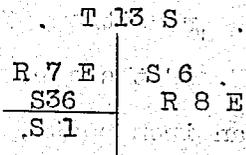
chains

The course of the line bet. the cor. of secs. 7, 12, 13 and 18 and the cor. of Tps. 13 and 14 S., R.8 E. is S.0°08'W., and the distance is 320.24 chs. I will re-survey this line bet. said cors. setting the proper 1/2 sec. and sec. cors. for R. 8 E. at proportionate distance

From the cor. of Tps. 13 and 14 S., R. 8 E., the cor. of Tps. 13 and 14 S., R. 7 E., is plainly visible, I run for said cor.

South Over rough, broken mountainous land facing nearly S. Descend over series of sandstone ledges.

- .70 Top of sandstone ledge, 40 ft. high, bears NE. and W.
- .75 Base of ledge, bears NE. and W. Coal outcroppings 1 to 3 ft. thick extend E. and W. along base of ledge.
- 6.70 Leave ledges, enter scattering oak brush, bears E. and W. Descend more gradually.
- 11.20 Ravine, 254 ft. below tp. cor., course SE. Ascend abruptly NE. slope.
- 14.88 Point, 35 ft. above ravine, falls E. Gradually descend over gentle SE. slope.
- 31.65 Intersect the cor. of Tps. 13 and 14 S., R. 7 E., which is an iron post, 3 ins. in dia., 12 ins. above ground, firmly set, with brass cap marked



T. 14 S.
1911

and witnessed by a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

This cor. was set by Messrs Collier and Swan, U. S. Transitmen in 1911.

Re-survey of the W. bdy. of T. 13 S., R. 8 E.

chains

I return to the cor. of Tps. 13 and 14 S., R. 8 E. and re-survey, setting cors. for Rs. 7 and 8 E. The cors. for R. 7 E. will be set at intervals of 40.00 chs. commencing at the cor. of Tps. 13 and 14 S., R. 7 E. and those for R. 8 E. at intervals of 40.03 chs. commencing at the cor. of Tps. 13 and 14 S., R. 8 E.

From cor. of Tps. 13 and 14 S., R. 8 E., I run

N.0° 08'E., re-surveying on W. bdy. sec. 31, T.13 S., R.8 E.

Ascend over rough broken mountainous land facing nearly S.

3.50 Base of perpendicular sandstone ledge , 66 ft. high , bears NE. and W. Coal outcroppings along base of ledge.

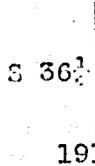
3.55 Top of ledge , 198 ft. above Tp. cor., bears NE. and W. Continue ascent

4.85 Top of rocky spur , 40 ft. above top of ledge , projects SE.

Gradually descend over rocky slope facing nearly E.

8.35 which added to 31.65 chs. makes a northing of 40.00 chs. from the cor. of Tps. 13 and 14 S., R.7 E., at which point

Set an iron post , 3 ft. long , 1 in in dia., 24 ins. in a mound of stone and earth , 4 ft. base , 2 ft. high , for $\frac{1}{2}$ sec. cor. on the E. bdy. of sec. 36., T.13 S., R.7 E., with brass cap marked



raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , W. of cor.

Note: On account of natural obstacles , I am unable to set post in the ground.

Enter dense sage and scattering oak and service brush bears E. and W.

19.00 Bottom of ravine , 100 ft. below $\frac{1}{2}$ sec. cor., course SE.

Ascend abruptly over series of sandstone ledges , bears E. and W.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains																
28.75	Top of sharp rock ridge , 330 ft. above ravine , bears E. and W.															
	Descend abruptly over steep N. slope covered with loose rocks.															
29.50	Enter scattering spruce and aspen timber , bears E. and W.															
39.34	Bottom of ravine , 297 ft. below ridge , course NE. Leave pine and aspen timber , thence through dense oak , service and buck brush. Gradually ascend over land sloping nearly E.															
40.03	Proportionate measurement Set a sandstone , 15 x 14 x 8 ins., 10 ins. in the ground for $\frac{1}{4}$ sec. cor. on the W. bdy. sec. 31 , T.13 S., R.8 E., marked $\frac{1}{2}$ on E. face, from which A spruce , 6 ins. diam., bears N.29°E., 68 lks. dist., marked $\frac{1}{4}$ S 31 B T															
48.35	Set an iron post , 3 ft. long , 3 ins. in dia., 12 ins. in the ground and 12 ins. in a mound of stone and earth , 4 ft. base , 1 ft. high , for cor. of secs. 25 and 36 on the E. bdy. of T.13 S., R. 7 E., with brass cap marked <div style="text-align: center;"> <table border="1"> <tr> <td></td> <td>T 13 S.</td> <td></td> </tr> <tr> <td></td> <td>S 25</td> <td></td> </tr> <tr> <td>R 7 E</td> <td>—</td> <td>R 8 E</td> </tr> <tr> <td></td> <td>S 36</td> <td></td> </tr> <tr> <td></td> <td>1911</td> <td></td> </tr> </table> </div>		T 13 S.			S 25		R 7 E	—	R 8 E		S 36			1911	
	T 13 S.															
	S 25															
R 7 E	—	R 8 E														
	S 36															
	1911															
	raise a mound of stone , 2 ft. base , $1\frac{1}{2}$ ft. high , W. of cor. Note: On account of underlying rock I am unable to set post more than 12 ins. in the ground. This cor. stands at the same point as set by Messrs Collier and Swan in 1911.															
53.09	Spur , 20 ft. above sec. cor., projects NE. Leave oak brush and descend over steep grassy N. slope															
61.87	Leave grassy slope , enter scattering pine and aspen timber and undergrowth of service brush, bears E. and W.															
71.19	Bottom of ravine , 501 ft. below spur , course NE. Gradually ascend															

Resurvey of the W. bdy. of T.13 S., R. 8 E.

chains

72.52 Leave aspen and pine timber , enter dense oak and service brush , bears NE. and SW.

75.26 Spur , 47 ft. above ravine , projects E.
Descend

76.00 Enter aspen timber , bears E. and W.

79.41 Bottom of wash from ravine to the SW., 10 lks. wide ,
2 ft. deep , 50 ft. below spur , course E.
Thence over nearly level land in bottom of ravine.

80.06 Proportionate measurement

Set a sandstone , 18 x 15 x 12 ins., 12 ins. in the ground for cor. of secs. 30 and 31 on the W. bdy. of T. 13 S., R. 8 E., marked with 1 notch on S. and 5 notches on N. edge , from which

An aspen , 10 ins. diam., bears N.51 $\frac{3}{4}$ °E.,55 lks.
dist., marked T 13 S R 8 E S 30 B T

An aspen , 8 ins. diam., bears S.58°E.,67 lks.
dist., marked T 13 S R 8 E S 31 B T

Land rough broken mountains draining E. with steep rocky N. and S. slopes of ridges into ravines.

Soil , generally rocky of sanstone formation and loose shale with slight indications of coal ; 3rd. rate.

Sub-soil , rocky ; 4 th. rate.

Timber , scattering patches of pine and aspen.

Undergrowth , oak , sage , service and chapparal. Land supports much short rich grass , good for grazing purposes.

Land , mountainous , heavily timbered or covered with dense undergrowth , 111.71 chs.

December 4 : The sky is overcast at noon , observations for lat. are impossible.

N.0°08' E., re-surveying on W. bdy. sec. 30.

Over rough mountainous land draining E., through aspen timber and undergrowth of service brush.

Gradually ascend in bottom of ravine

Re-survey of the W. bdy. of T.13 S., R.8 E.

- chains
- .60 Wash in bottom of ravine from NW., 20 lks. wide , 3 ft. deep , course SE.
Ascend from ravine over SW. slope of ridge.
- 1.95 Leave aspen timber , enter dense oak , service , buck and sage brush , bears NW. and SE.
- 8.29 Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor. on the E. bdy. of sec. 25 , T. 13 S., R. 7 E., with brass cap marked

S 25 $\frac{1}{2}$

1911

raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , W. of cor.

This $\frac{1}{4}$ sec. cor. stands at the same point as set by Messrs Collier and Swan , U. S. Transitmen in 1911.

Ascend abruptly

- 16.74 Point , 383 ft. above sec. cor., falls SW.

Thence gradually descend over land sloping W. on E. side of ravine draining S., through dense brush.

- 40.03 Proportionate measurement

Set a sandstone , 20 x 12 x 7 ins., 15 ins. in the ground for $\frac{1}{4}$ sec. cor. on the W. bdy. sec. 30 , T.13 S.,R.8 E., marked $\frac{1}{4}$ on E. face , raise a mound of stone , 2 ft. base 1 $\frac{1}{2}$ ft. high , E. of cor.

- 46.80 Leave dense brush , enter aspen timber , bears N.20°E. and S.20°W.

- 48.01 Bottom of ravine and wash , 8 lks. wide , 2 ft. deep , course S.10°W.

Gradually ascend over east slope.

- 48,29 Set an iron post , 3 ft. long , 3 ins. in dia., 24 ins. in the ground for cor. of secs. 24 and 25 on the E. bdy. of T.13 S.,R.7 E., with brass cap marked

T 13 S √

R 7 E

S 24

S 25

R 8 E

1911

Re-survey of the W. bdy. of T.13 S.,R.8 E.

chains

from which

An aspen , 8 ins. diam., bears S 26°W., 44 lks.
dist., marked T 13 S R 7 E S 25 B T

An aspen., 8 ins. diam., bears N.33°W., 34 lks.
dist., marked T 13 S R 7 E S 24 B T

This cor. stands at the same point as set by Messrs
Collier and Swan , U. S. Transitmen in 1911.

52.10 Low spur , 15 ft. above ravine , projects E.

Gradually descend.

57.10 Bottom of ravine , and wash , 8 lks. wide , 1 ft. deep,
course SE.

Leave aspen timber , enter dense oak , service and sage
brush.

Ascend abruptly over nearly S. slope of ridge.

69.07 Leave brush , bears E. and W. Continue ascent over
grassy slope.

72.39 Top of high mountain ridge , 451 ft. above ravine ,
bears E. and W.

Descend abruptly over steep N. grassy slope.

80.06 Proportionate measurement.

Set a sandstone , 18 x 8 x 6 ins., 12 ins. in the ground
for cor. of secs. 19 and 30 on the W. bdy. of T.13 S.,R.
8 E., marked with 2 notches on S. and 4 notches on N.
edge ; raise a mound of stone , 2 ft. base , 1 1/2 ft. high,
E. of cor.

Land , rough broken mountains draining S. on S.72.39
chs. and N. on N. 7.67 chs.

Soil , generally gravelly and rocky of sandstone
formation on rocky sub-soil ; 4 th. rate.

Timber , scattering patches of aspen.

Undergrowth , oak , service , buck and sage brush.

Considerable grass , good for grazing purposes.

Land mountainous , heavily timbered or covered with
dense undergrowth , 80.06 chs.



Re-survey of the W. bdy. of T.13 S., R.8 E.

- chains
- N.0° 08'E., re-surveying on the W. bdy. sec.19
- Over rough mountainous land facing N. into Gordon Cree
- Descend abruptly over grassy slope.
- 5.45 Enter aspen timber , bears E. and SW.
- 6.69 Bottom of ravine , 213 ft. below sec. cor., course NE.
Gradually ascend over nearly E. slope
- 8.23 Set an iron post , 3 ft. long , 1 in. in dia., 24 ins.
in the ground for $\frac{1}{2}$ sec. cor. on the E. bdy. sec. 24 ,
T.13 S., R.7 E., with brass cap marked
- S 24 $\frac{1}{2}$
- 1911
- from which
- An aspen , 5 ins. diam., bears S.35°W., 11 lks.
dist., marked $\frac{1}{2}$ S 24 B T
- An aspen , 5 ins. diam., bears N.33 $\frac{1}{2}$ °W., 21 lks
dist., marked $\frac{1}{4}$ S 24 B T
- This cor. stands 6 lks. E. of the point set by Messrs
Collier and Swan , U. S. Transitmen in 1911
- 9.30 Leave aspen timber , enter dense oak brush , bears E.
and W.
- 12.79 Top of spur , 35 ft. above ravine , projects NE.
Leave oak brush , enter grassy slope.
Descend abruptly over exceptionally steep slope into
Gordon Creek.
- 13.94 Enter aspen timber , bears E. and W.
- 14.67 Leave aspen timber , enter grassy slope , bears E. 3
chs. and W. 1 ch.
- 18.82 Leave grassy slope , enter dense aspen timber , bears
E. and W.
- 20.12 Leave aspen timber , enter dense spruce , balsam fir
and pine , bears E. and W.
- 26.52 Bottom of canyon and Gordon creek , 6 lks. wide , 4 ins.
deep , in wash , 1 ch. wide , 20 ft. deep , 514 ft. below
spur , course E.

Re-survey of the W. bdy. of T.13 S., R. 8 E.

chains

Leave spruce , balsam fir and pine timber , enter dense oak , service , buck and sage brush.

Ascend abruptly over steep S. slope of canyon.

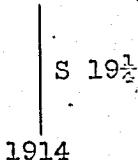
31.03 Broken sandstone ledge , 20 ft. high , bears E. and W.

37.13 Leave brush , bears E. and W. Thence on rocky slope.

37.83 Top of spur , 429 ft. above Gordon Creek , projects SW. Thence gradually descend over rocky land facing nearly W.

40.03 Proportionate measurement

Set an iron post , 3 ft. long , 1 in. in dia. , 24 ins. in the ground for $\frac{1}{2}$ sec. cor. on the W. bdy. sec. 19 , T. 13 S. , R. 8 E . , with brass cap marked



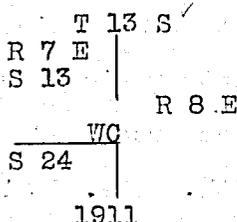
raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , E. of cor.

48.23 Bottom of ravine , 66 ft. below spur , course S.30°W.

Point for cor. of secs. 13 and 24 on the E. bdy. of T.13 S.,R. 7 E. falls in wash where cor. cannot be set.

48. The point for this cor. as set by Messrs Collier and Swan , U. S. Transitmen , bears N.14 and W.14 lks.

48.37 Set an iron post , 3 ft. long , 3 ins. in dia. , 12 ins. in the ground and 12 ins. in a mound of stone and earth 4 ft. base , 1 ft. high , for witness cor. to secs. 13 and 24 on the E. bdy. of T.13 S.,R.7 E. , with brass cap marked



from which

A pine , 19 ins. diam. , bears S. 17°W. , 133 lks. dist. , marked W C T 13 S R 7 E S 24 B T

An aspen , 4 ins. diam. , bears N. 35°W. , 30 lks.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

... dist., marked W C T 13 S R 7 E S 13 B T

Note: On account of natural obstacles I am unable to set post more than 12 ins. in the ground.

Enter dense service, oak and sage brush, bears NE. and S

Ascend abruptly over nearly S. slope.

59.02' Leave dense brush, bears E. and W.

60.37 Top of ridge, 422 ft. above ravine, bears E. and W.

Descend abruptly over grassy N. slope.

62.75 Enter dense aspen and scattering pine timber, bears E and W.

67.37 Enter dense pine timber and willow undergrowth, bears E. and W.

69.24 Leave dense pine timber

75.51 Bottom of ravine, 382 ft. below ridge, course NE. Gradually ascend over nearly E. slope.

76.14 Leave pine timber, thence through scattering aspen and dense undergrowth of oak, service, maple and sage brush.

80.06 Proportionate measurement

Set a sandstone, 20 x 12 x 8 ins., 15 ins. in the ground for cor. of secs. 18 and 19 on the W. bdy. of T.13 S., R. 8 E., marked with 3 notches on N. and 3 notches on S. edge; from which

An aspen 4 ins. diam., bears N. 42° E., 29 lks.

... dist., marked T 13 S R 8 E S 18 B T

An aspen, 3 ins. diam., bears S. 39 1/2° E., 22 lks.

dist., marked T 13 S R 8 E S 19 B T

Land, rough, broken mountains with steep N. and S. slopes of ridges into ravines draining E.

Soil, gravelly and rocky of sandstone formation on rocky sub-soil; 4th. rate. Indications of coal along line

Timber, dense patches of aspen, spruce, balsam fir and pine.

Undergrowth, dense oak, service, willow, sage, maple and chapparal. Considerable grass, good for grazing purposes.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

Land mountainous , heavily timbered or covered with dense undergrowth , 80.06 chs.

N.0° 08'E., re-surveying on the W. bdy. sec. 18

Over rough mountainous land draining E., through dense undergrowth of oak , service , maple and sage and scattering aspen timber.

1.86 Leave maple undergrowth , bears E. and W.

4.83 Leave aspen timber , enter dense choke cherry undergrowth , bears E. and W. Thence ascend steep SE. slope.

5.81 Leave choke cherry undergrowth.

8.17 Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor., on the E. bdy. sec. 13 , T.13 S., R.7 E., with brass cap marked

S 13 $\frac{1}{2}$

1911

raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , W. of cor.

This cor. stands 7 lks. N. and 6 lks. E. of the cor. point as set by Messrs Collier and Swan , U. S. Transitemen in 1911.

14.51 Top of ridge , 273 ft. above sec. cor., bears E. and W.

Leave dense brush , enter dense aspen and scattering pine and balsam fir timber , bears E. and W.

Descend abruptly over N. slope.

17.06 Enter scattering willow undergrowth , bears E. and W.

25.26 Head of small canyon , 273 ft. below ridge , course E. Gradually ascend.

27.30 Low spur , 20 ft. above canyon , projects E.

Gradually descend.

30.06 Bottom of ravine , 42 ft. below spur , course SE.

Ascend abruptly over S. slope.

36.66 Leave aspen timber , enter dense undergrowth of oak ,

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

service and sage brush.

40.03

Proportionate measurement

Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for $\frac{1}{2}$ sec. cor. on the W. bdy. sec. 18 , T.13 S., R. 8 E., with brass cap marked

S 18 $\frac{1}{2}$

1914

raise a mound of stone , 2 ft. base , 1 $\frac{1}{2}$ ft. high , E. of cor.

Cor. stands 277 ft. above ravine.

Continue steep ascent.

45.18

Top of ridge , 138 ft. above $\frac{1}{2}$ sec. cor., bears E. and W.

Leave dense oak , service and sage brush ; enter dense aspen and scattering pine timber.

Gradually descend over N. slope towards Beaver Creek.

48.17

Set an iron post , 3 ft. long , 3 ins. in dia., 24 ins. in the ground for cor. of secs. 12 and 13 on the E. bdy. of T.13 S., R.7 E., with brass cap marked

	T 13 S	
R 7 E		
S 12		
<hr/>		
S 13		R 8 E

1911

from which

An aspen , 10 ins. diam., bears N.39°W., 39 lks. dist., marked T 13 S R 7 E S 12 B T

An aspen , 5 ins. diam., bears S.30°W., 30 lks. dist., marked T 13 S R 7 E S 13 B T

70.37

Bottom of Beaver canyon , 336 ft. below ridge , bears E. and W. Leave aspen and pine timber , enter dense undergrowth of willows , bears W. and E.

Thence across canyon bottom.

73.41

Beaver creek , 10 lks. wide , 3 ins. deep , good water, course S.80°E.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

73.81 Old county road , from Scofield , Utah , to Price , Utah bears N.80°E. and S.80°W.

Leave willow undergrowth and canyon , bears N.80°E. and S.80°W.; enter scattering aspen timber.

Ascend over S. slope.

79.20 Spur , 74 ft. above creek , projects E.

Gradually descend.

80.06 The cor. of secs. 7 , 12 , 13 and 18 heretofore described.

I destroy all marks on this cor. pertaining to R.7 E.

Land , rough broken mountains with steep N. and S. slopes of ridges into ravines draining E.

Soil , gravelly , black loam and rocky on gravelly sub-soil ; 2 nd rate.

Timber , aspen and scattering pines ,

Undergrowth , dense oak , service , sage , willow , maple and buck brush. Good grass for grazing purposes.

Land mountainous , heavily timbered or covered with dense undergrowth , 80.06 chs.

North , re-surveying on the W. bdy. sec. 7

Over mountainous land draining E., through dense aspen timber and undergrowth of choke cherry.

Descend over N slope.

5.16 Bottom of canyon , leave aspen timber and choke cherry undergrowth , enter dense willow undergrowth , bears E. and W.

Thence across canyon bottom .

7.29 Branch of Beaver creek , 4 lks. wide , 3 ins. deep , good water , 42 ft. below sec. cor., course SE.

Enter swamp , bears NW. and SE.

8.11 Leave swamp ; bears E. and W. A spring bears E. 3 lks.

Set an iron post , 3 ft. long , 1 in. in dia., 24 ins. in the ground for 1/2 sec. cor. on the E. bdy. sec. 12 ,

T.13 S., R 7 E., with brass cap marked

Re-survey of the W. bdy. of T.13 S., R. 8 E.

chains

S 12 $\frac{1}{2}$

1911

from which

An aspen , 4 ins. diam., bears N.6°W., 124 lks.
dist., marked $\frac{1}{2}$ S 12 B T

An aspen , 5 ins. diam., bears N.15°40'W., 85 lks.
dist., marked $\frac{1}{2}$ S 12 B T

This cor. stands at the same point as set by Messrs
Collier and Swan , U. S. Transitmen in 1911.

8.20 Leave willow undergrowth and canyon , bears E. and W.
Enter aspen timber and choke cherry undergrowth ; ascend
S. slope of spur.

11.85 Spur , 79 ft. above $\frac{1}{2}$ sec. cor., projects SE.
Gradually descend.

17.06 Bottom of ravine , 30 ft. below spur , course SE.
Ascend over SE. slope ridge.

39.46 Proportionate measurement , 193 ft. above ravine.
Set an iron post , 3 ft. long , 1 in. in dia., 24 ins.
in the ground for $\frac{1}{2}$ sec. cor. on the W. bdy. sec. 7 ,
T.13 S., R.8 E., with brass cap marked

S 7 $\frac{1}{2}$

1914

from which

An aspen , 4 ins. diam., bears S.45 $\frac{1}{2}$ °E., 15 $\frac{1}{2}$ lks.
dist., marked $\frac{1}{2}$ S 7 B T

Thence along E. slope of ridge.

48.11 Set an iron post , 3 ft. long , 3 ins. in dia., 24 ins.
in a mound of stone and earth , 4 ft. base , 2 ft. high
for cor. of secs. 1 and 12 on the E. bdy. of T.13 S., R.
7 E., with brass cap marked

T 13 S
R 7 E
S 1

S 12

R 8 E

1911

Re-survey of the W. bdy. of T.13 S., R.8 E

chains

raise a mound of stone , 2 ft. base , $1\frac{1}{2}$ ft. high , W. of cor.

Note: On account of natural obstacles , I am unable to set post in the ground.

This cor. stands at the same point as set by Messrs Collier and Swan , U. S. Transitmen in 1911

Begin steep ascent

53.89 Top of steep ascent , 110 ft. above sec. cor., bears E. and SW.

Gradually ascend over rolling top of ridge through dense aspen timber.

65.93 Top of high ridge , 50 ft. above top of steep ascent bears E. and W.

Gradually descend over N. slope.

74.72 Leave dense aspen timber , enter dense pines and scattering aspen , bears E. and W.

78.04 Bottom of canyon and creek , 4 lks. wide , 2 ins. deep , good water , 137 ft. below ridge , course E.

Leave pine timber , enter dense aspen.

Ascend over SE. slope of ridge.

78.92 Proportionate measurement

Set a sandstone , 20 x 8 x 8 ins., 15 ins. in the ground for cor. of secs. 6 and 7 on the W. bdy. of T.13 S., R. 8 E., marked with 1 notch on N. and 5 notches on S. edge from which

An aspen , 7 ins. diam., bears N. $54\frac{3}{4}^{\circ}$ E., 47 lks. dist., marked T 13 S R 8 E S 6 B T

An aspen , 6 ins. diam., bears S. 25° E., 23 lks. dist., marked T 13 S R 8 E S 7 B T

Land , rough mountains , with steep N. and S. slopes of ridges into ravines draining E.

Soil , generally light , moist , sandy loam and decayed vegetation mixed with gravel and rocks , on rich black loam and gravelly sub-soil ; 2 nd. rate.

Timber , aspen and pine ; the pine timber usually predominating on the N. slopes.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

Undergrowth , sage , choke cherry , oak and chapparal. Considerable short mountain grass , good for grazing purposes.

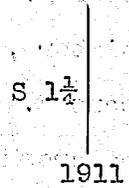
Land mountainous , heavily timbered or covered with dense undergrowth , 78.92 chs.

North , re-surveying on the W. bdy. sec. 6.

Over mountainous land draining E., through dense aspen timber and undergrowth of choke cherry and sage brush.

Ascend SE. slope of ridge.

9.19 Set an iron post , 3 ft. long , 1 in.in. dia., 24 ins. in the ground for $\frac{1}{4}$ sec. cor. on the E. bdy. sec. 1 , T.13 S.,R.7 E., with brass cap marked



from which

An aspen 6 ins. diam., bears N.59°W., 108 lks. dist., marked $\frac{1}{4}$ S 1° B T

The point for the $\frac{1}{4}$ sec. cor. as set by Messrs Collier and Swan , U. S. Transitmen is 28 lks. S. and 2 lks. W.

16.35 Top of ridge , 220 ft. above sec. cor., bears N.70°E. and S.70°W.

Gradually descend.N. slope.

18.73 Leave aspen timber and choke cherry undergrowth , enter dense pine , spruce and balsam fir and aspen timber , bears E. and W.

Descend abruptly over N. slope ridge.

32.85 Bottom of canyon and stream , 6 lks. wide , 2 ins. deep good water , 391 ft. below ridge , course N.80°E.

Leave , pine , spruce and balsam fir timber , enter dense aspen.

Ascend over E. slope of spur.

39.46 Proportionate measurement , 50 ft. above stream.

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

Set a sandstone , 15 x 12 x 8 ins., 10 ins. in the ground for $\frac{1}{2}$ sec. cor., on the W. bdy. sec. 6 , T.13 S., R.8 E., marked $\frac{1}{2}$ on E. face , from which

An aspen , 4 ins. diam., bears S.86 $\frac{1}{4}$ °E., 29 lks. dist., marked $\frac{1}{2}$ S 6 B T

Cor. stands in small swale draining SE.

Ascend abruptly over steep S. slope.

43.50 Top of steep ascent , bears E. and W.

Gradually ascend

47.84 250 ft. above canyon

The cor. of Tps. 12 and 13 S., R.7 E, heretofore described.

Thence

N.0°49'E., with continuous chaining

49.80 Enter dense choke cherry undergrowth , bears E. and W.

53.34 Leave choke cherry undergrowth.

54.03 Top of ridge , 65 ft. above Tp. cor., bears E. and W.

Gradually descend over N. slope, through scattering patches of dense aspen timber.

78.92 The closing cor. of Tps. 12 and 13 S., R.8 E., heretofore described.

Land , mountainous , draining E.

Soil , generally rich black loam mixed with gravel on gravelly and rocky sub-soil ; 2 nd. rate.

Timber , aspen , spruce , balsam fir and pine. Dense spruce , balsam fir and pine on N. slopes.

Undergrowth , choke cherry , sage brush , and scattering patches of oak and service brush. Good grass for grazing purposes.

Land mountainous heavily timbered or covered with dense undergrowth , 78.92 chs.

Test of instrument

December 6: Having been unable to observe Polaris prior to this date on account of the unsettled condition of

Re-survey of the W. bdy. of T.13 S., R.8 E.

chains

the weather and the cloudy skies at night , I proceed to test the solar apparatus of my transit on a meridian determined ~~determined~~ by observations made on Polaris at the close of this survey as follows:

At my camp which is situated near the cor. of secs. 7 and 18 on the W. bdy. of the tp. in approximate lat. 39° 42' N.; longitude 111° 07' W.; I set off 39° 42' on the lat. arc ; 22° 25' S., on the decl. arc ; and at 9 h. a. m. apparent time determine with the solar a meridian and mark the line thus determined by a nail in a peg set firmly in the ground about 5 chs. N. of my station.

I make numerous solar observation during the morning and find that the meridians all agree within 1'.

With my instrument on the meridian , I set off 22° 27' S. on the decl. arc ; and at apparent noon observe the sun on the meridian ; the resulting lat. is 39° 42'.

At 3 h. p.m. apparent time , I set off 39° 42' on the lat. arc ; 22° 27' S., on the decl. arc ; and determine a meridian with the solar. This meridian agrees with the solar meridian determined this a. m.

At 4 h. 34 m. p. m. l. m. t., I observe Polaris in accordance with the Manual of Instructions and note the angle to the nail in the peg already set about 5 chs. N. of the station as 17° to the west

Correct L.M.T. of obsn. Dec. 6	4h. 34m. p.m.
Correct L.M.T. of U.C. Polaris Dec. 6	
reduced to long. 111° 37' W.	8 h. 29.3 p.m.
Time until U. C. Polaris	3 h. 55.3m.
Time elapsed since U.C. Polaris Dec 5.	20h. 00.8m
Hour angle of Polaris at obsn.	3 h. 55.3m
Azimuth of Polaris at obsn.-----	N. 1° 17' E.

The Polaris meridian therefore agrees with the solar meridians and I conclude that the instrument is in good adjustment.

The magnetic bearing of the true meridian at 4 h. 45m. p.m. is N. 16° 30' W., the angle thus determined gives the magnetic decl. 16° 30 E.

General Description

December 6 , 1914

GENERAL DESCRIPTION

This township boundary is situated on the east breaks of a spur of the Wasatch mountains dividing Castle and Pleasant valleys. It is rough and mountainous throughout being cut by numerous deep ravines and canyons draining in an easterly direction.

The soil is of a yellow sandstone formation and very rocky on the S. $\frac{1}{2}$ of the bdy., while that of the N. is composed more of disintegrated shales and decayed vegetation and in parts is very fertile.

Considerable aspen , balsam fir , spruce and pine timber is found along the line and practically all of the N. slopes are covered with a heavy growth of balsam fir , spruce and pine timber which is of commercial value.

Dense undergrowth of oak , service , sage , choke cherry, maple , buck and willow brush are found in patches. All of the land produces an abundant growth of short , rich mountain grass , good for grazing purposes.

Numerous outcroppings and indications of bituminous coal are found on the entire line and from all indications they extend from valuable coal beds already found about 5 miles to the west.

Howard W. Miller

U. S. Surveyor.

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SUBDIVISIONS OF T. 13 S. R. 7 E.

Latitudes, Departures and Closing Errors

Lines Designated	True Bearing	Distance chs.	Latitudes		Departures	
			N. chs.	S. chs.	E. chs.	W. chs.
North Bdy.	N.89°58'E.	240.00 [✓]	.13 [✓]		240.00	
East Bdy.	South	126.76 [✓]		126.76 [✓]		
East Bdy.	S.0°08'W.	320.24 [✓]		320.24		.75 [✓]
East Bdy.	South	31.65 [✓]		31.65		
South Bdy.	West	199.35				199.35
"	"	39.92				39.92
West Bdy.	S.89°53'W.	79.68 [✓]	79.68	.08	.09 [✓]	
West Bdy.	N.0°04'E.	79.98 [✓]	79.98		.07 [✓]	
West Bdy.	N.0°03'E.	39.94 [✓]	39.94		.09 [✓]	
West Bdy.	N.0°08'E.	39.92 [✓]	39.92			.07 [✓]
West Bdy.	N.0°06'W.	80.14 [✓]	80.14			.02 [✓]
West Bdy.	N.0°01'W.	39.99 [✓]	39.99			
West Bdy.	North	39.93 [✓]	39.93			.01 [✓]
West Bdy.	N.0°01'W.	40.01 [✓]	40.01		.27 [✓]	
West Bdy.	N.0°23'E.	39.31 [✓]	39.31		.24 [✓]	
West Bdy.	N.0°21'E.				.30 [✓]	
	Convergency					
Totals			479.03	478.73	241.06	240.12
			<u>478.73</u>		<u>240.12</u>	
Error in lat. and dep.			.30		.94	

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CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
 Robert E.L. Collier and
 George C. Swan, U. S. ^{Transitmen} ~~Surveyor~~, during the periods and in the capacities
 stated opposite our several signatures, in surveying all those parts or portions of Township No.
 South, Range No. 7 East

the Salt Lake Base and Meridian, in the State of U t a h
 which are represented in the foregoing field notes as having been executed by ^{them} ~~him~~, and under ^{their} ~~his~~ direc-
 tion; and that said survey has been, in all respects, to the best of our knowledge and belief, well and
 faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>John S. Finnenberg</i>	June 27, 1911	Oct. 30, 1911	Chainman ✓
<i>Lawrence H. Swan</i>	July 13, 1911	Sept. 6, 1911	Chainman ✓
<i>Hugo Price</i>	July 15, 1911	Oct. 30, 1911	Chainman ✓
<i>Ayrum Winter</i>	Sept. 12, 1911	Oct. 30, 1911	Axman ✓
<i>Ray Francom</i>	July 19, 1911	Sept. 6, 1911	Axman ✓
<i>H. C. Cletcher Barton</i>	Sept. 4, 1911	Sept. 19, 1911	Chainman ✓
<i>Frank Johnson Jr.</i>	Sept. 7, 1911	Sept. 19, 1911	Chainman ✓
<i>S. G. Christad</i>	Sept. 4, 1911	Sept. 19, 1911	Flagman ✓
<i>William E. Cox</i>	Sept. 7, 1911	Sept. 19, 1911	Flagman ✓
<i>George W. Stinson</i>	Sept. 7, 1911	Sept. 19, 1911	Moundman ✓
<i>Christopher P. Russell</i>	Sept. 27, 1911	Oct. 29, 1911	Chainman ✓
<i>Arthur Skofod</i>	Sept. 20, 1911	Sept. 30, 1911	Moundman ✓
<i>Albert G. Graw</i>	Sept. 26, 1911	Sept. 30, 1911	Flagman ✓
<i>Joseph Whaley</i>	Sept. 26, 1911	Oct. 29, 1911	Chainman ✓

Subscribed and certified to before me on the dates of the final service as shown above.

Robert E. L. Collier
 U. S. ~~Surveyor~~
 U. S. Transitman

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursu-
ance of special instructions received from the U. S. Surveyor General for _____
bearing date of the _____ day of _____, 191____, I have well, faithfully, and t-
rue in my own proper person, and in strict conformity with said instructions, the Manual of Survey-
ing Instructions, and the laws of the United States, surveyed all those parts or portions of _____

_____ of the _____
_____ Meridian, in the State of _____, which are represent-
ed in the foregoing field notes as having been executed by me, and under my direction; and I do fur-
ther solemnly swear that all the corners of said survey have been established and perpetuated in strict ac-
cordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Survey-
or General for _____ and in the specific manner described in the field notes, and
that the foregoing are the original field notes of such survey.

U. S. Surveyor

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191____ }



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

_____, 191____

The foregoing field notes of the survey of _____

executed by _____
under his special instructions dated _____, 191____, having b-
een critically examined, and the necessary corrections and explanations made, the said field notes, and
surveys they describe, are hereby approved.

U. S. Surveyor General

I certify that the foregoing transcript of the field notes of the above-described surveys in _____
_____ has been correctly copied from the original notes on file in this office.

U. S. Surveyor General

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursu
of special instructions received from the U. S. Surveyor General for _____
bearing date of the _____ day of _____, 191 _____, I have well, faithfully, and t
in my own proper person, and in strict conformity with said instructions, the Manual of Surve
Instructions, and the laws of the United States, surveyed all those parts or portions of _____

For final catha of Transitren see book "H" T. 11 S., R. 9 E

_____ of the _____
_____ Meridian, in the State of _____, which are represent
the foregoing field notes as having been executed by me, and under my direction; and I do fur
solemnly swear that all the corners of said survey have been established and perpetuated in strict ac
ance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surv
General for _____ and in the specific manner described in the field notes, and
the foregoing are the original field notes of such survey.

U. S. Surveyor

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191 _____ }



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah _____, 191 _____

The foregoing field notes of the ~~xxxxxx~~ retracement and resurvey of the So
and East Boundaries, and retracement and survey of the Subdivisional
lines of Township No. 13 South, Range No. 7 East of the Salt Lake Bas
and Meridian, Utah

executed by _____ Robert F. L. Collier and George C. Swan
under ^{their} special instructions dated _____ plamental special instructions dated Ju
May 25, 1911 and sup- A, 191 1, having b
critically examined, and the necessary corrections and explanations made, the said field notes, and
surveys they describe, are hereby approved.

U. S. Surveyor General

I certify that the foregoing transcript of the field notes of the above-described surveys in _____
_____ has been correctly copied from the original notes on file in this office

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,

Howard W. Miller, U. S. Surveyor, during the periods and in the capacities

indicated opposite our several signatures, in surveying all those parts or portions of the survey of

the T. 13 N. and subdivision of T. 13 S., R. 7 E. and

of the T. 13 N., R. 7 E.

the Salt Lake Base and Meridian, in the State of Utah

which are represented in the foregoing field notes as having been executed by him, and under his direction;

and that said survey has been, in all respects, to the best of our knowledge and belief, well and

faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Edward Nelson	Nov. 22, 1914	Dec. 19, 1914	chainman
Edward Jones	Nov. 22, 1914	Dec. 12, 1914	chainman
William Fredrickson	Nov. 22, 1914	Dec. 12, 1914	cornerman
Victory Skirtum	Nov. 22, 1914	Dec. 12, 1914	axman

Subscribed and certified to before me on the dates of the final service as shown above.

Howard W. Miller
U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, Howard W. Miller, U. S. Surveyor, do solemnly swear that, in pursuance of supplemental special instructions received from the U. S. Surveyor General for Utah bearing date of the 31 day of August, 1914, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of Subdivision of T. 13 S., R. 7 E.

and Meridian, in the State of Utah of the Salt Lake Base, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Utah and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Howard W. Miller
U. S. Surveyor.

Subscribed by said Howard W. Miller and sworn to before me this 31 day of February, 1916

A. C. Thoresen
U. S. Surveyor General
for Utah.



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Salt Lake City, Utah

The foregoing field notes of the survey of the subdivision of a portion of 191
Township No. 13 South, Range No. 7 East of the Salt Lake Base and
Meridian, Utah

executed by Howard W. Miller
supplemental under his special instructions dated August 31, 1914, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
 Howard W. Miller U. S. Surveyor, during the periods and in the capacities
 stated opposite our several signatures, in surveying all those parts or portions of the
 re-survey of the W. bdy. of T.13 S., R.8 E.

of the Salt Lake Base and Meridian, in the State of Utah
 which are represented in the foregoing field notes as having been executed by him, and under his direc-
 tion; and that said survey has been, in all respects, to the best of our knowledge and belief, well and
 faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Edward Nelson	November 30	Dec. 6 , 1914	chainman
Edward Jones	Nov. 30 , 1914	Dec. 6 , 1914	chainman
William Fredrickson	Nov. 30 , 1914	Dec. 6 , 1914	cornerman
Theodore Christensen	Nov. 30 , 1914	Dec. 6 , 1914	axman

Subscribed and certified to before me on the dates of the final service as shown above.
 Howard W. Miller
 U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, Howard W. Miller, U. S. Surveyor, do solemnly swear that, in pursu-
supplemental
of special instructions received from the U. S. Surveyor General for Utah
bearing date of the 31 day of August, 1914, I have well, faithfully, and tr-
in my own proper person, and in strict conformity with said instructions, the Manual of Survey
Instructions, and the laws of the United States, surveyed all those parts or portions of the
re-survey of the W. bdy. of T.13 S., R.8 E

of the Salt Lake Bas
and Meridian, in the State of Utah, which are represented
the foregoing field notes as having been executed by me, and under my direction; and I do fur-
solemnly swear that all the corners of said survey have been established and perpetuated in strict acco-
ance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surve-
General for Utah and in the specific manner described in the field notes, and t-
the foregoing are the original field notes of such survey.

Howard W. Miller

U. S. Surveyor

Subscribed by said Howard W. Miller, and sworn to before me
this 31 day of February, 1916

J. B. Purse
U. S. Surveyor General
for Utah



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Salt Lake City, Utah,

The foregoing field notes of the ^{re} survey of the west boundary of Township No. 13
South, Range No. 8 East of the Salt Lake Base and Meridian, Utah,

executed by Howard W. Miller
supplemental
under his special instructions dated August 31, 1914, having be-
critically examined, and the necessary corrections and explanations made, the said field notes, and t-
resurveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in
has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____ U. S. Surveyor, do solemnly swear that, in pursu-
of special instructions received from the U. S. Surveyor General for _____
bearing date of the _____ day of _____, 191____, I have well, faithfully, and tr-
in my own proper person, and in strict conformity with said instructions, the Manual of Survey-
Instructions, and the laws of the United States, surveyed all those parts or portions of _____

_____ of the _____
_____ Meridian, in the State of _____, which are represent-
the foregoing field notes as having been executed by me, and under my direction; and I do fur-
solemnly swear that all the corners of said survey have been established and perpetuated in strict ac-
ance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surv-
General for _____ and in the specific manner described in the field notes, and
the foregoing are the original field notes of such survey.

U. S. Surveyor

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, Oct. 30, 191____

The foregoing field notes of the ~~survey~~ retracement and resurvey of the So-
boundary and retracement, resurvey, and survey of the subdivisional
lines of Township No. 13 South, Range No. 7 East and the resurvey of
west boundary of Township No. 13 South, Range No. 8 East of the Salt
Lake Base and Meridian, Utah

executed by Robert E. L. Collier, George C. Swan, and Howard W. Miller
their special instructions dated July 23, 1911 and Aug.
under ~~h~~ special instructions dated May 23, 1911, and supplemental, 1914, having
critically examined, and the necessary corrections and explanations made, the said field notes, and
retracements, resurveys and
surveys they describe, are hereby approved.

W. C. Choresen
U. S. Surveyor General

I certify that the foregoing transcript of the field notes of the above-described surveys in _____
_____, has been correctly copied from the original notes on file in this office

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Page

BOOK A-409

4A I.
FIELD NOTES

OF THE SURVEY OF THE

EAST BOUNDARY

OF

TOWNSHIP 11 SOUTH, RANGE 10 EAST

Of the Salt Lake Base and Meridian,

in the State of Utah

EXECUTED BY

Claude L. Heist

In the capacity of U. S. ~~Surveyor~~ ^{Translator} under instructions dated May 23, 1911

issued by the United States Surveyor General to govern surveys included in

Group No. 13, which were approved by the Commissioner of the General Land

Office, July 3, 1911, pursuant to authority contained in the Act of

Congress dated _____, 1911.

Survey commenced September 15, 1912.

Survey completed September 18, 1912.

5-11-12-41

BOOK A-409

INDEX DIAGRAM.

Township 11 S., Range 10 E.

6	5	4	3	2	1	9
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18	17	16	15	14	13	6
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30	29	28	27	26	25	3
31	32	33	34	35	36	2

Survey commenced September 15, 1912, and executed with a Young & Sons light mountain transit No. 8517, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at Salt Lake City, found correct, and was approved by the surveyor general for Utah, September 13, 1912.

I examine the adjustments of the transit, and correct the level and collimation errors; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:

At the standard cor. of T. 11 S., R. 10 and 11 E., heretofore described, in approximate latitude $39^{\circ}48'40''N.$, longitude $110^{\circ}46'27''W.$; I set off $39^{\circ}49'N.$, on the lat. arc, $2^{\circ}55'N.$, on the decl. arc, and at 3h.55m., p.m., l.m.t., determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of the cor.

At 7h.55m., p.m., l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

September 15, 1912.

September 16: At 7 a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ}31'$ to the west, and mark the meridian thus determined, by cutting a small groove in the stone set Sept. 15, on which the meridian falls 0.4 ins. east of the mark determined by the solar.

At 7h.55m., a.m., l.m.t., I set off $39^{\circ}49'N.$, on the lat. arc, $2^{\circ}39'N.$, on the decl. arc, and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark falls 0.3 ins. east of

CHAINS

the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations, defines positions for meridians, respectively about 0'21" west and 0'16" east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h.30m., a.m. is N. 16°45' W.; the angle thus determined gives the mag. decl. 16°45' E.

From the stand Tp. cor., I run

North, bet. secs. 31 and 36.

Ascend over mountainous land through dense undergrowth.

4.85 Spur, projects W.

Descend.

21.85 Hollow, 250 ft. deep, course W.

Ascend abruptly.

38.40 Spur, projects SW.

Descend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 36 | S 31

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

42.65 Intersect a 1 in. iron post, as set by U.S. Transitmen Collier and Swan in 1911, for the $\frac{1}{4}$ sec. cor.

Note: This $\frac{1}{4}$ sec. cor., had evidently been set by Messrs. Collier and Swan, at 42.65 chs., in order to eliminate the necessity of setting closing cors. on the W. bdy. of the Tp. The S. bdy. of the Tp. being out of the prescribed limits for course, and therefore a sectional correction line being required.

Not knowing the condition of the S. bdy., however at the time of this survey, I set the $\frac{1}{4}$ sec. cor., at 40.00 chs., and destroy the $\frac{1}{4}$ sec. cor. as set by Collier and Swan.

45.00 Enter scattering aspen, bears E. and W.

68.50 Head of hollow, 50 ft. deep, course SW.

CHAINS

Ascend.

73.50 Spur, projects SW.
Descend.

77.70 Wash, 25 lks. wide, 8 ft. deep, in hollow, 115 ft. deep, course SW.

Ascend. Leave scattering aspens.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 25, 30-31 and 36, with brass cap, marked

T 11 S

R 10 E | R 11 E

S 25 | S 30

S 36 | S 31

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Dense undergrowth on 80.00 chs.

Sept. 16: At this cor. I set off 2°35'N., on the decl. arc, and at 11h. 55m., a.m.; 1.m.t., observe the sun on the meridian, the resulting lat. is 39°50'N.

North, bet. secs. 25 and 30.

Ascend over mountainous land through scattering timber and dense undergrowth.

2.65 Intersect an iron post, 3 ins. in diam., as set by Collier and Swan, for the cor. of secs. 25-30-31 and 36.

I destroy this cor.

28.00 Spur, projects W.

Descend.

CHAINS

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 25 | S 30

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

42.65 Intersect 1 in. iron post, as set by Collier and Swan for the $\frac{1}{4}$ sec. cor.

I destroy this cor.

49.00 Head of hollow, 50 ft. deep, course SW. Ascend.

70.50 Ridge, bears NE. and SW.

Descend,

71.50 Enter heavy growth of aspen, bears E. and W.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 19-24-25 and 30, with brass cap, marked

T 11 S

R 10 E | R 11 E

S 24 | S 19

S 25 | S 30

1912

from which

An aspen, 5 ins. diam., bears N. 45° E., 27 lks. dist. marked T 11 S R 11 E S 19 BT.

An aspen, 5 ins. diam., bears S. 40° E., 18 lks. dist. marked T 11 S R 11 E S 30 BT.

An aspen, 6 ins. diam., bears S. 30° W., 17 lks. dist. marked T 11 S R 10 E S 25 BT.

An aspen, 4 ins. diam., bears N. 41° 30' W., 28 lks. dist. marked T 11 S R 10 E S 24 BT

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, loose rock.

Timber, aspen and cedar.

Undergrowth, oak, service berry, buck brush, sage brush and

CHAINS

grass.

Heavy timber on 8.50 chs.

September 16, 1912.

Sept. 17: At 7h.55m., a.m., l.m.t., I set off $39^{\circ}50'N.$, on the lat. arc, $2^{\circ}17'N.$, on the decl. arc, and determine a meridian with the solar at the cor. of secs. 19-24-25 and 30.

Thence I run

North, bet. secs. 19 and 24.

Descend over mountainous land through heavy aspen.

.50 Leave heavy aspen, bears E. and W. Enter dense undergrowth.

2.65 Intersect an iron post, 3 ins. in diam., set by Collier and Swan as the cor. of secs. 19-24-25 and 30.

I destroy this cor.

7.35 Descend abruptly.

Enter heavy aspen, bears NW. and SE.

30.95 Leave heavy aspen, bears NW. and SE.

31.70 Stream of fresh water, 2 lks. wide, 6 ins. deep, in bottom of hollow, 585 ft. deep, course NW.

Ascend abruptly. Enter scattering timber.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$$\frac{1}{4} S 24 \quad | \quad S 19$$

1912

from which

A pinon pine, 8 ins. diam., bears $N.47^{\circ}E.$, 12 lks. dist. marked $\frac{1}{4} S 19 BT.$

A pinon pine, 12 ins. diam., bears $S.8^{\circ}W.$, 96 lks. dist. marked $\frac{1}{4} S 24 BT.$

51.90 Spur, projects SW.

Descend.

62.25 Enter heavy timber, bears NW. and SE.

67.45 Head of hollow, 100 ft. deep, course NW.

CHAINS

Ascend. Leave timber bears NW. and SE. Enter dense undergrowth.

74.20 Spur, projects NW.

Descend, Enter heavy aspen, bears NW. and SE.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 13-18-19 and 24, with brass cap, marked

T 11 S	
R 10 E	R 11 E
S 13	S 18
S 24	S 19

1912

no suitable trees available, raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pinon pine, cedar and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Sept. 17: At this cor. I set off 2° 12' N., on the decl. arc and at 11h. 55m. a.m., 1 m. t., observe the sun on the meridian, the resulting lat. is 40° 51' N.

North, bet. secs. 13 and 18.

Descend abruptly over mountainous land, through scatter aspen and dense undergrowth:

25.00 Stream of fresh water, 2 lks. wide, 3 ins. deep, in bottom hollow, 400 ft. deep, course SW.

Ascend abruptly.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the ¼ sec. cor., with brass cap, marked

¼ S 13	S 18
--------	------

1912

E. BOUNDARY OF T. 11 S., R. 10 E.

CHAINS

from which

An aspen, 5 ins. diam., bears N. 51° E., 23 lks. dist., marked 1/4 S 18 BT.

An aspen, 4 ins. diam., bears N. 56° W., 17 lks. dist., marked 1/4 S 13 BT.

56.50 Leave aspen, enter heavy pine and spruce timber, bears NE. and SW.

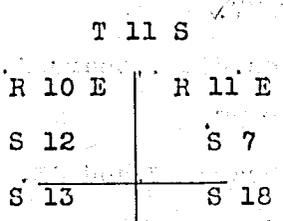
72.00 Spur, projects NE.

Descend.

74.50 Hollow, 50 ft. deep, course NE.

Ascend. Leave heavy timber, bears E. and W. Enter scattering timber and dense undergrowth.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 7-12-13 and 18, with brass cap, marked



1912

from which

A spruce, 10 ins. diam., bears N. 36° 45' E., 88 lks. dist. marked T 11 S R 11 E S 7 BT.

A spruce, 16 ins. diam., bears S. 75° E., 77 lks. dist., marked T 11 S R 11 E S 18 BT.

A spruce, 12 ins. diam., bears S. 24° 45' W., 26 lks. dist. marked T 11 S R 10 E S 13 BT.

A spruce, 8 ins. diam., bears N. 60° W., 62 lks. dist., marked T 11 S R 10 E S 12 BT.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, loose rock and gravel.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

September 17, 1912.

CHAINS

September 18: At 7h.54m., a.m., l.m.t., I set off 40°
 on the 1st. arc, 1°53'N., on the decl. arc, and determine
 meridian with the solar at the cor. of secs. 7-12-13
 18.

Thence I run
 North, bet. secs. 7 and 12.
 Ascend along E. slope of ridge, over mountainous land,
 scattering timber and dense undergrowth.

- 1.50 Enter heavy timber, bears NW. and SE.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked



An aspen, 5 ins. diam., bears S. 85°30'E., 37 lks. dist.
 marked $\frac{1}{4}$ S 7 BT.

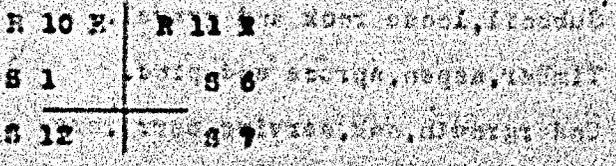
An aspen, 6 ins. diam., bears S. 46°W., 78 lks. dist.
 marked $\frac{1}{4}$ S 12 BT.

Leave heavy timber, bears NW. and SE. Enter scattering
 timber and dense undergrowth.

- 49.90 Ridge, bears NW. and SE.
- Descend.
- 51.70 Enter heavy timber, bears E. and W.
- 57.90 Hollow, 100 ft. deep, course SE.
- Ascend.

- 69.60 County road, Colton, to Theodore, bears NE. and SW.
- Leave timber, bears NE. and SW. Enter dense undergrowth.

- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the
 ground, for the cor. of secs. 1-6-7 and 12, with brass cap,
 marked



Chains

from which

A pine, 6 ins. diam., bears S.13°E., 215 lks.
dist., marked T 11 S R 11 E S 7 B T.

A pine, 12 ins. diam., bears N.27°W., 286 lks.
dist., marked T 11 S R 10 E S 1 B T.

No. other trees available, raise a mound of stone, 2 ft.
base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep; 3rd rate.
Subsoil, gravel and loose rock.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush, sagebrush
and grass.

September 18: At this cor. I set off 1°48'N. on the
decl. arc; and at 11h 54m a.m., l.m.t., observe the
sun on the meridian; the resulting lat. is 40°52'N.

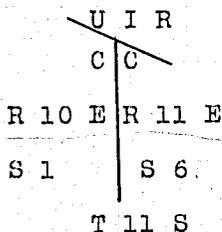
North, bet. secs. 1 and 6.

Ascend gradually over mountainous land, through scatter-
ing timber and dense undergrowth.

3.41 Top of ascent. High ridge, bears NW. and SE., dividing
Price Valley from the Uintah Basin.

Intersect the S. Bdy. of the Uintah Indian Reservation.

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins.
in the ground, for closing cor. of secs. 1 and 6, T.
11 S., Rs. 10 and 11 E., with brass cap marked



1912

from which

A pine, 6 ins. diam., bears S.50°E., 213 lks.
dist., marked T 11 S R 11 E S 6 B T.

A pine, 8 ins. diam., bears S.22°W., 64 lks.

E. BOUNDARY OF T. 11 S., R. 10 E.

Chains

dist., marked T 11 S R 10 E S 1 B T.

From this closing cor. the 68th mile cor. on the boundary
bears as follows:

S79°45'E., 28.00 chs. to mile post No. 68.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine.

Undergrowth, service berry, buck brush, sagebrush and
grass.

September 18, 1912.

Claude L. Heist

U. S. Transitman.

BOUNDARIES OF T. 11 S., R. 10 W.

Latitudes, Departures and Closing Errors.

Line designated	True Bearing	Distance Chs.	Latitudes		Departures	
			N. Chs.	S. Chs.	N. Chs.	S. Chs.
E. Bdy.	North	403.41	403.41			
N. Bdy.	N. 79° 45' W.	4.00	.71			3.94
	S. 50° 30' W.	38.00		24.17		29.32
	N. 85° 30' W.	27.80	.73			27.79
	S. 74° 30' W.	79.20		21.16		78.32
	N. 55° 15' W.	34.70	19.77			28.52
	S. 54° 15' W.	23.30		13.82		18.91
	S. 80° 45' W.	69.00		3.91		68.69
	S. 23° 45' W.	16.00		14.64		6.44
	S. 70° 30' W.	45.00		15.02		40.42
	N. 67° 45' W.	38.00	14.39			35.17
	S. 69° 00' W.	77.00		27.59		71.89
	N. 63° 00' W.	40.00	18.16			38.64
	S. 62° 45' W.	40.00		18.31		35.56
	N. 74° 00' W.	.09	.02			.09
W. Bdy.	South	313.65		313.65		
S. Bdy.	East	11.03			11.03	
	S. 89° 42' E.	69.85		.36	69.85	
	S. 89° 22' E.	40.08		.44	40.08	
	S. 89° 19' E.	39.92		.46	39.92	
	S. 89° 40' E.	40.17		.23	40.17	
	S. 89° 48' E.	39.90		.14	39.90	
	S. 89° 15' E.	40.00		.52	40.00	
	S. 88° 52' E.	39.98		.79	39.97	
	S. 89° 31' E.	39.75		.34	39.75	
	S. 89° 51' E.	40.17		.11	40.17	
	S. 89° 15' E.	80.10		1.05	80.10	
Convergency						.46
			457.19	456.53	480.94	481.36
			456.53			450.94
Error in lat. and dep.			.66			.42

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4-679

J
BOOK A-409
JWE
KFB **FIELD NOTES**

OF THE SURVEY OF THE

RETRACEMENT OF THE

OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10 E.

Of the Salt Lake Base and Meridian,

in the State of Utah

EXECUTED BY

Ralph Gentry

in the capacity of U. S. Surveyor ^{supplemental special} ~~in~~, under instructions dated August 31, 1914,

issued by the United States Surveyor General to govern surveys included in
Group No. 13, which were approved by the Commissioner of the General Land
Office, September 12, 1914

Survey commenced November 24, 1914

Survey completed November 27, 1914

Noted by 3rd M. B. Co. 10-15-95

INDEX DIAGRAM.

Township Range

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
10	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

RETRACEMENT
OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S., THROUGH R.10 E.

Survey commenced Nov. 24, 1914, and executed with a Young & Sons light mountain transit No. 8584, with a Smith solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was approved by the assistant supervisor of surveys in assignment instructions dated April 24, 1914.

A steel tape, 2 chains long was used in all field work, together with clinometers for determining slope angles. The reduced horizontal distances only appear in these notes. The tape was tested frequently during the season, comparisons being made with a standard tape 1 chain long kept for this purpose.

I examine the adjustments of the transit and the solar attachment, and correct the level and collimation errors of the transit and the errors of the verniers of the latitude and declination arcs of the solar apparatus; then, to test the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian determined by observations on Polaris, I proceed as follows:

At the standard cor. of secs. 34 and 35, T. 11 S., R. 10 E. as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post, 3 ins. dia., 12 ins. above the ground, with brass cap marked

T11S	R10E
S34	S35
SC	
1911	

with a sandstone 8 x 7 x 4 ins. above ground, marked SC on N. with 2 notches on E. and 4 notches on W. face, set by post, and a mound of stone 2 ft. base, 1½ ft. high N. of cor., in approximate latitude 39° 49' N., longitude

RETRACEMENT
OF
THE OFFSET FOR THE SECOND STANDARD PARALLEL S., THROUGH R.10 E.

110° 48' 00" W., I set off 20° 29' S. on the decl. arc; and at 11h 47m a.m.l.m.t., observe the sun on the meridian; the resulting lat. is 39° 49' N.

At 3h 47m p.m.l.m.t., I set off 39° 49' on the lat. arc, 20° 28' S. on the decl. arc; and mark a point in the meridian determined with the solar, by driving a nail in a stake firmly set in the ground 5 chs. N. of my station.

Nov. 24, 1914.

Nov. 25: At 3h 13m a.m.l.m.t., I observe Polaris at western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined on a peg driven in the ground 5 chs. N. of my station.

At 7h 30m a.m.l.m.t., I lay off the azimuth of Polaris 1° 30' to the east, and mark the meridian thus determined by driving a nail in the stake set Nov. 24, on which the meridian falls 0.5 ins. west of the mark determined by the solar.

At 7h 47m a.m.l.m.t., I set off 39° 49' on the lat. arc; 20° 36' S. on the decl. arc; and mark a point in the meridian determined with the solar, by driving a nail in the stake already set 5 chs. N. of my station; this mark falls 0.4 ins. west of the meridian established by the Polaris observations.

The solar apparatus by p.m. and a.m. observations defines positions for meridians respectively about 0' 26" east and 0' 21" west of the meridian established by the Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h 15m a.m. is N. 16° 45' W.; the angle thus determined gives the mag. decl. 16° 45' E.

From the standard sec. cor. already described I retrace

RETRACEMENT
OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S., THROUGH R.10 E.

- Chains. East, along S.bdy. of sec.35,
Over rolling land; through undergrowth of sagebrush and
grass.
- 0.90 Descend into Willow Creek, bearing N. and S.
- 3.25 Willow Creek; clear water, 15 lks. wide, 6 ins. deep,
course S.
Thence over rolling land; enter buck brush bearing N. and
S.
- 5.45 The SE. cor. of log cabin, 12 x 12 ft., bears N. 66 lks.
dist.
The SW. cor. of log cabin 15 x 12 ft. bears N. 66 lks. dist.
- 5.70 The SW. cor. of log cabin 20 x 15 ft. bears N. 105 lks. dist.
The claimants of these cabins unknown.
- 16.39 Fall 27 lks. N. of an iron post, 2 ins. dia., 12 ins. above
the ground, with brass cap marked
$$\begin{array}{c} \frac{1}{4} \\ \hline C \quad C \\ S3 \quad S2 \\ 1911 \end{array}$$

as set by Collier and Swan under their assignment Group
No. 13. Corner is unwitnessed.
- 34.00 Foot of spur, bearing N. and S.
Ascend.
- 39.75 Fall 34 lks. N. of S. $\frac{1}{4}$ sec. cor. as reestablished by Coll-
ier and Swan under their assignment Gr. No. 13, which is
an iron post 1 in. in dia., 12 ins. above the ground,
with brass cap marked
$$\begin{array}{c} S35 \\ \frac{1}{4} \\ \hline SC \\ 1911 \end{array}$$
 from which
A cross (X) on ledge bears N. 0° 35' E. 22 lks. dist.
Mound of stone 2 $\frac{1}{2}$ ft. base, 2 ft. high N. of cor.
- 42.00 Point of spur projects from N., 150 ft. high.
Descend.
- 48.00 Foot of spur bears N. and S.
Thence over rolling land.
- 59.50 Wash, 35 lks. wide, 20 ft. deep, course SW.

RETRACEMENT OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S., THROUGH R. 10 E.

Chains.
71.00

Foot of rolling ridge, bears N. and S.,
Ascend.

79.92

Fall 45 lks. N. of the standard cor. of secs. 35 and 36, as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post 3 ins. in dia. set 6 ins. in the ground, and in mound of earth and stone, 5 ft. base, 18 ins. high, with brass cap marked

T11S	R10E
S35	S36
SC	
T12S	
1911	

Lying on top of ground beside this post is the old cor. which is a sandstone 3 x 10 x 16 ins., mkd. SC on one face, 5 notches on one face, and 1 notch on opposite face.

The course of the W. half mile is therefore S. 89° 31' E. 39.75 chs.; and the E. half-mile S. 89° 51' E. 40.17 chs.

Land, gently rolling and rolling hills, draining SW. Soil, clay and sandy loam and gravel. No timber.

Undergrowth, sagebrush, buck brush, and grass.

11.00

Top of ridge, 100 ft. high, bears N. and S.
Desc.

15.00

Foot of ridge, bears N. and S.

Thence over rolling land.

17.87

Fall 5 lks. N. of the closing cor. of secs. 1 and 2, as established by Collier and Swan under their assignment Group No. 13, which is an iron post, 2 ins. in dia., 12 ins. above the ground, with brass cap marked

1
C C
S 2. S. 1. S.
1911

RETRACEMENT
OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL SOUTH, THROUGH R. 10 E.

- Chains. Old mound of stone S. of cor.
- 28.00 S. foot of spur, bears N.E. and N. 75° W.
- 31.60 Wash, 120 lks. wide, 20 ft. deep, course S. 20° W.
Ascend.
- 39.00 Spur, projects SE., 50 ft. high.
Desc.
- 40.07 Fall 53 lks. N. of the St. $\frac{1}{4}$ sec. cor., as established by Collier and Swan under their assignment Group No. 13, which is an iron post 1 in. in dia., 12 ins. above ground with brass cap marked

S 36
 $\frac{1}{4}$
 S C
 1911

with mound of stone, 3 ft. base, 2 ft. high N. of cor.
Lying on top of ground beside this post is the old cor. which is a sandstone 14 x 10 x 3 ins. mkd. SC $\frac{1}{4}$ on one face.

Nov. 25: At this cor. I set off 20° 41' S. on the decl. arc; and at 11h 47m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is 39° 49'

- 48.50 Ravine, 50 ft. below spur, stream of clear water, 6 lks. wide, 2 ins. deep, course S. 30° W.
Enter scattering serviceberry brush.
Ascend.

- 80.10 Fall 106 lks. N. of the standard cor. of T. 11 S., R. 10 and 11 E., as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post, 3 ins. in dia., 12 ins. above the ground, with brass cap marked

T11S
 R10E | R11E
 S36 | S31
 SC
 1911

with mound of stone, 3 ft. base, 2 ft. high N. of cor.
Old corner is set by post, and is a sandstone 6 x 5 x 4 ins. above the ground, marked SC on N., with 6 grooves

RETRACEMENT

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10 E.

Chains.

on N., E., and W. faces.

The course of this line is therefore S.89°15'E. and distance 80.10 chs.

Land, rolling and mountainous, draining SW.

Soil, clay, sandy loam, and gravel, with loose rock and gravel subsoil.

No timber.

Undergrowth, sage, serviceberry brush, and grass.

From the standard cor. of T. 11 S., R. 10 and 11 E. I retrace

East along the S. bdy. of sec. 31,

Over mountainous land; through sagebrush and grass.

Ascend.

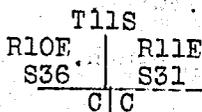
18.59 Fall 26 lks. N. of the closing cor. of T. 12 S., R. 10 and 11 E., as re-established by Collier and Swan under

their assignment Group No. 13, which is an iron post,

3 ins. in dia., set 12 ins. in the ground, and in a

mound of earth and stone, 4 ft. base, 12 ins. high, with

brass cap marked



T12S
1911

with mound of stone, 3 ft. base, 3 ft. high S. of cor.

Cor. stands on top of ridge, 75 ft. above standard township corner, bears N. and S.

The course of this line is therefore S.89°12'E. and the dist. 18.59 chs.

Land, mountainous.

Soil, sandy loam and loose rock, on subsoil of loose rock and clay.

No timber.

Undergrowth, sagebrush and grass.

Nov. 25, 1914.

RETRACEMENT
OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10 E.

Chains.

Nov. 26: At 7h 47m a.m. l.m.t., I set off 39° 49' on the lat. arc; 20° 47' S. on the decl. arc; and determine a meridian with the solar at the standard cor. of secs. 34 and 35, heretofore described.

Thence I retrace West, along S. bdy. of sec. 34, Over rolling hills; through undergrowth of sagebrush and grass. Ascend slightly.

5.50 Road, Duchesne to Helper, bears N. and S.

8.00 Ridge, 35 ft. above sec. cor., bears N. and S. Descend.

19.20 Foot of ridge, 100 ft. below top, bears N. and S. Road, Colton to Duchesne, bears N. and S. Thence over rolling land.

39.98 Fall 80 lks. S. of the St. $\frac{1}{4}$ sec. cor., as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post 1 in. in dia., 12 ins. above the ground, with brass cap marked

S 34
 $\frac{1}{4}$
SC
1911

with mound of stone 3 ft. base, 2 $\frac{1}{2}$ ft. high N. of cor. Lying on the ground, beside this post is the old corner, a sandstone 15 x 9 x 6 ins., marked $\frac{1}{4}$ SC on one face.

42.25 Wash, 15 lks. wide, 4 ft. deep, course S.

63.85 Fall 129 lks. S. of the closing cor. of secs. 3 and 4, as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post 2 ins. in dia., 12 ins. above the ground, with brass cap marked

$\frac{1}{4}$
C C
S 4 S 3
1911

with mound of stone, 2 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high S. of cor. Lying on the ground beside this post is the old corner, which is a sandstone 10 x 10 x 3 ins. marked $\frac{1}{4}$ C C on

RETRACEMENT
OF
THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH P. 1

Chains.

'one face'. The marks are nearly obliterated.

79.98 Fall 133 lks.S.of the standard cor.of secs.33 and 34, as re-established by Collier and Swan under their assignment Group No.13, which is an iron post, 3 ins.in dia. 12 ins.above the ground, with brass cap marked

T11S	R10E
S33	S34
S 6	
1911	

with mound of stone, 2 ft.base, 1½ ft.high N.of cor. The old cor., which is a sandstone 15 x 10 x 10 ins., mkd.S C on N.face, and 3 notches on F.and W.sides, is set by this post.

The course and distance of the E.half-mile is N.88° 52' W. 39.98 chs., and the W.half-mile N.89° 15' W.40.00 chs

Land, rolling.

Soil, light, sandy and clay loam, 24ins.deep.

No timber.

Undergrowth, sagebrush and grass.

Land slopes gently to the S.

West, on retracement, along the S.bdy.of sec.33, Over gently rolling land; through undergrowth of sagebrush and grass.

13.20 Old road, bears NW. and SE.

15.75 Wash, 50 lks.wide, 5 ft.deep, course SE.

Ascend.

16.10 Irrigation ditch 4 lks.wide, 12 ins.deep, course SE.

24.00 Spur, 50 ft.high, projects S.60° E.

Descend.

39.00 Wash, 100 lks.wide, 10 ft.deep, course S.15° E.

Thence over rolling land.

39.90 Fall 14 lks.S.of Sta ¼ sec.cor., as re-established by Collier and Swan under their assignment Group No.13, which is an iron post 1 in.in dia., 12 ins.above the

RETRACEMENT OF THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10 E.

Chains. ground, with brass cap marked

S 33
1
S C
1911

with mound of stone 2 1/2 ft. base, 2 ft. high N. of cor.
Lying on the ground beside this post is the old corner,
which is a sandstone 18 x 12 x 6 ins., marked 1/4 S C on
one face.

53.25 Wash, 25 lks. wide, 4 ft. deep, with stream of clear water
2 lks. wide, 1 in. deep, course SE.

62.00 Foot of spur, bears NW. and SE.
Ascend.

66.05 Fall 26 lks. S. of the closing cor. of secs. 4 and 5, as re-
established by Collier and Swan under their assignment
Group No. 13, which is an iron post, 2 ins. in dia., 12
ins. above the ground, with brass cap marked

1
C C
S5 S4
T12S R10E
1911

with mound of stone, 3 ft. base, 1 1/2 ft. high S. of cor.
The old corner, which is a sandstone 12 x 8 x 4 ins.
above the ground, marked 1/2 C C on N. face, and 4 notches
on E. and 2 notches on W. sides, is set by this post.

68.25 Old pole fence bears NW. and SE.

80.07 Fall 36 lks. S. of the standard cor. of secs. 32 and 33, as
re-established by Collier and Swan under their assign-
ment Group No. 13, which is an iron post, 3 ins. in dia.
12 ins. above the ground, with brass cap marked

T11S R10E
S32 S33
S C
1911

with mound of stone 3 ft. base, 2 ft. high N. of cor.
Lying on top of the ground by this post is the old corner
which is a sandstone 12 x 10 x 10 ins., marked S C on
one face, 4 notches on one face, and 2 notches on op-
posite face.

RETRACEMENT
OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 1

Chains.

The course of the E. half-mile is therefore N. 89° 48' W. and distance 39.90 chs., and of the west half-mile N. 89° 40' W. 40.17 chs.

Land, rolling, draining to the S.

Soil, light, sandy loam and clay, 24 ins. deep, on sub-soil of gravel and sand.

Undergrowth, sagebrush and grass.

No timber.

Nov. 26: At this cor. I set off 20° 53' S. on the decl. arc; and at 11h 47m a.m. l.m.t., observe the sun on the meridian, the resulting lat. is 39° 49'

West, on retracement, along S. bdy. of sec. 32, Over rolling hills; through undergrowth of sagebrush and grass. Descend.

6.00 Ravine, 75 ft. deep, course S.

Ascend.

10.50 Spur, projects S.

Descend.

17.50 Wash, 100 lks. wide, 2 ft. deep, 100 ft. below spur, course S. 20° E. Ascend.

21.00 Top of ascent, 100 ft. above wash, bears N. and S.

Thence over rolling land, sloping gently to the SW.

39.92 Fall 48 lks. S. of the standard $\frac{1}{4}$ sec. cor., as re-established by Collier and Swan under their assignment

Group No. 13, which is an iron post 1 in. in dia. 12 ins. above the ground, with brass cap marked

S 32
 $\frac{1}{4}$
S C
1911

with mound of stone 2 ft. base, 1 1/2 ft. high N. of cor.

Lying on top of the ground, beside this post, is the old corner, which is a sandstone 20 x 16 x 6 ins., marked SC $\frac{1}{4}$ on one face.

Nov. 26, 1914.

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10 E.

Chains.

Nov. 27: At 8h 18m a.m. l.m.t., I set off 39° 49' on the lat. arc; 21° 00' S. on the decl. arc; and determine a meridian with the solar at a point 48 lks. S. of the St. $\frac{1}{4}$ sec. cor. on the S. bdy. of sec. 32.

Thence I continue

West on retracement along the S. bdy. of sec. 32,

46.50 Wash, 10 lks. wide, 4 ft. deep, course S. 20° W.

Ascend.

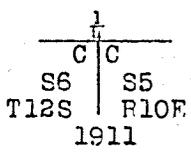
54.50 Knoll, 50 ft. high.

Descend.

64.00 Wash, 25 lks. wide, 4 ft. deep, with stream of clear water, 2 lks. wide, 1 in. deep, course S.

Ascend slightly.

68.25 Fall 80 lks. S. of the closing cor. of secs. 5 and 6, as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post, 2 ins. in dia., 12 ins. above the ground, with brass cap marked



with mound of stone; 3 ft. base, 1 $\frac{1}{2}$ ft. high S. of cor.

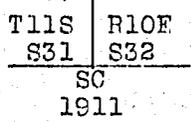
The old corner, which is a sandstone 12 x 10 x 8 ins. marked $\frac{1}{4}$ C C on N. face, 5 notches on E. and 1 notch on W. face, is set by this post.

69.50 N. end of circular sheep corral, 150 lks. wide.

76.00 Ridge, 75 ft. high, bears N. and S.

Descend.

80.00 Fall 92 lks. S. of the standard cor. of secs. 31 and 32, as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post, 3 ins. in dia., 12 ins. above the ground, with brass cap marked



with mound of stone 3 ft. base, 1 $\frac{1}{2}$ ft. high N. of cor.

-12-
 RETRACEMENT
 OF

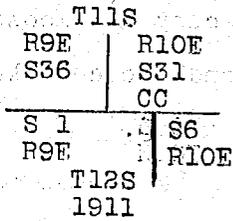
THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R.10

Chains.	<p>The course of the E. half-mile is therefore N. 89° 19' W. and distance 39.92 chs.; and of the west half-mile N. 89° 22' W. 40.08 chs.</p> <p>Land, rolling hills, draining S.</p> <p>Soil, light sandy loam and loose rock, on subsoil of gravel, sandy and loose rock.</p> <p>Undergrowth, sagebrush and grass.</p> <p>No timber.</p>
	<p>West on a retracement along the S. bdy. of sec. 31,</p> <p>Over rolling hills; through undergrowth of sagebrush and grass. Descend.</p>
5.00	<p>Ravine, 50 ft. below sec. cor., course S.</p> <p>Ascend gradually.</p>
8.00	<p>Old road, bears NW. and SE.</p>
14.00	<p>Top of ascent, 40 ft. above ravine, slopes S.</p> <p>Descend slightly.</p>
26.00	<p>Foot of descent, 25 ft. below top of ascent, course SE.</p> <p>Ascend gradually.</p>
38.20	<p>Old road, bears NW. and SE.</p>
40.00	<p>Fall 21 lks. S. of the $\frac{1}{4}$ sec. cor., as re-established by Collier and Swan under their assignment Group No. 13, which is an iron post 1 in. in dia., 12 ins. above the ground, with brass cap marked</p>
	<p>S 31</p> <hr style="width: 50px; margin: auto;"/> <p>1911</p>
57.00	<p>with a mound of stone $2\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high N. of cor.</p> <p>Spur, 40 ft. above foot of ascent, projects S.</p> <p>Descend.</p>
69.85	<p>Fall 36 lks. S. of the closing cor. of T. 12 S., Rs. 9 and 10 E. as established by Collier and Swan under their assignment Group No. 13, which is an iron post, 3 ins. in dia., 12 ins. above the ground, with brass cap marked</p>

RETRACEMENT OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH E.10 E.

Chains.

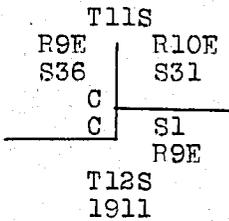


with mound of stone, 2½ ft. base, 2 ft. high S. of cor.
 The old corner, which is a sandstone 8 x 8 x 6 ins. above
 the ground, marked C C on N. face, and 6 notches on E.,
 W., and S. faces, is set by this post.

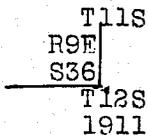
77.30 Wash, 25 lks. wide, 6 ft. deep, water 10 lks. wide, 3 ins.
 deep, 100 ft. below spur, course S.15° W.

Ascend.

80.88 Fall 36 lks. S. of the closing cor. of Tp. 11 South, R. 10 E.
 established by Collier and Swan under their assignment
 Group No. 13, which is an iron post, 3 ins. in dia., 12
 ins. above the ground, with brass cap marked



with mound of stone, 3 ft. base, 2 ft. high E. of cor.
 The course of the E. 69.85 chs. is therefore N. 89° 42' W.;
 and of the west 11.03 chs. west.
 This cor. is 149 lks. N. of the corner of T. 11 S., R. 9 E.,
 as established by Collier and Swan under their assign-
 ment Group No. 13, which is an iron post, 3 ins. in dia.,
 12 ins. above the ground, with brass cap marked



with mound of stone, 3 ft. base, 3 ft high NW. of cor.
 The old cor., which is a sandstone 12 x 12 x 2 ins. above
 the ground, marked SC on N. face, and 6 notches on N., E.
 and W. faces is set by this post.
 Land, low rolling hills, draining S.

RETRACEMENT OF

THE OFFSET FOR THE SECOND STANDARD PARALLEL S. THROUGH R. 10

Soil, light sandy loam and clay and loose rock, with sub-soil of clay and gravel and loose rock.

Undergrowth, sagebrush and grass.

No timber.

Nov. 27: At this cor. I set off $21^{\circ} 04' S.$ on the decl. arc; and at 11h 48m a.m. l.m.t., observe the sun on the meridian; the resulting lat. is $39^{\circ} 49'$

Nov. 27, 1914.

U.S. Surveyor.

Note: For the notes of the relocation of the CC's and the new measurements southerly therefrom see book "Q" of this survey.

BOOK A-409

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, Ralph Gentry, U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in retracing surveying all those parts or portions of the Offset for the Second Standard Parallel South, through E. 10 E.,

of the Salt Lake Base and Meridian, in the State of Utah which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said retracement survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

Table with columns: NAME, PERIOD OF SERVICE (BEGUN, ENDED), CAPACITY. Rows include: Sterling Knight (Chainman), Stephen Reese (Chainman), Earnest P. Swain (Moundman), Nelson A. Miller (Flagman).

Subscribed and certified to before me on the dates of the final service as shown above.

Ralph Gentry U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, Ralph Gentry ~~supplemental~~, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Utah bearing date of the 31st day of August, 1914, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, ~~retraced~~ ^{retraced} all those parts or portions of the Offset for the Second Standard Parallel South, through R. 10 E.,

of the Salt Lake Base and Meridian, in the State of Utah, which are represented the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said ~~survey~~ ^{retracement} have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Utah and in the specific manner described in the field notes, and that the foregoing are the original field notes of such ~~survey~~ ^{retracement}.

Ralph Gentry
U. S. Surveyor.

Subscribed by said Ralph Gentry, and sworn to before me
this 20th day of January, 1915



A. C. Throsser
U. S. Surveyor General for Utah.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, Oct. 30, 1915

The foregoing field notes of the ~~XXXXXX~~ ^{retracement} of the offset for the Second Standard Parallel South, through Range 10 East of the Salt Lake Base and Meridian, Utah,

executed by Ralph Gentry under his special instructions dated August 31, 1914, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the ~~XXXXXX~~ ^{retracements} they describe, are hereby approved.

A. C. Throsser
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys ~~in~~ ⁱⁿ Utah, has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

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8A.
14B.

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BOOK A-409

FIELD NOTES

OF THE SURVEY OF THE

SUBDIVISIONS

OF

TOWNSHIP NO. 11 SOUTH, RANGE NO. 10 EAST

Of the Salt Lake Base and Meridian,

in the State of Utah

EXECUTED BY

John F. Stewart and Claude L. Heist

in the capacity of U. S. Surveyor and Transitman, under instructions dated May 23, 1911,

issued by the United States Surveyor General to govern surveys included in

group No. 13, which were approved by the Commissioner of the General Land

office, July 3, 1911.

Survey commenced September 17, 1912

Survey completed October 6, 1912

Subs 45-14-85
Glasgow 2-49-28
Blair 21 R. 6-12-00

INDEX DIAGRAM.

Township 11 S., Range 10 E.

6	5	4	3	2	1		
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							36

Survey commenced September 17,1912,and executed with a Young & Sons light mountain transit No.8515,with solar attachment.The horizontal limb is provided with two double verniers placed opposite to each other,reading to single minutes of arc,which is the least count of the verniers of the latitude and declination arcs.

The instrument was examined,tested on the true meridian at Salt Lake City,found correct,and was approved by the surveyor general for Utah,September 13,1912.

I examine the adjustments of the transit,and correct the level and collimation errors:then,to test the solar apparatus,by comparing its indications,resulting from solar observations made during a.m.and p.m.hours,with a meridian determined by observations on Polaris,I proceed as follows:

At the cor.of secs,25-30-31 and 36,T.11 S.,Rs.10 and 11 E. heretofore described,in approximate latitude $39^{\circ}49'32''N.$, longitude $110^{\circ}46'27''W.$;I set off $39^{\circ}50'N.$ on the lat.arc, $2^{\circ}08'N.$, on the decl.arc,and at 3h.55m.,p.m.,l.m.t.,determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground,5 chs.N.of the cor. At 7h.47m.,p.m.,l.m.t.,I observe Polaris at eastern elongation,in accordance with the Manual of Instructions, and mark a point in the line thus determined,on a peg driven in the ground,5 chs.N.of my station.

September 17,1912.

September 18: At 7h.30m.,a.m.,l.m.t.,I lay off the azimuth of Polaris, $1^{\circ}31'$ to the west,and mark the meridian thus determined,by cutting a small groove in the stone set Sept.17,on which the meridian falls 0.4 ins.east of the mark determined by the solar.

At 7h.54m.,a.m.,l.m.t.,I set off $39^{\circ}50'N.$, on the lat.arc, $1^{\circ}53'N.$, on the decl.arc,and mark a point in the meridian determined with the solar,by a cross on the stone already set 5 chs.N.of my station;this mark falls 0.3 ins.east of

CHAINS

the meridian established by the Polaris observation. The solar apparatus by p.m. and a.m. observations, defines positions for meridians, respectively about 0'21" west and 0'16" east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h.30m., a.m. is N.16°45'W.; the angle thus determined gives the mag. decl. 16°45'E.

Having previously retraced the S. bdy. of the Tp. and finding it out of the prescribed limits for course, therefore I run West, on a sectional correction line, Bet. secs. 25 and 36.

Descend over mountainous land, through scattering timber and dense undergrowth.

13.90 Hollow, 170 ft. deep, course SW.

Ascend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the 1/4 sec. cor., with brass cap, marked 1/4 S 25

to corner S 36

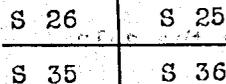
1912 raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

50.00 Ridge, bears NE. and SW.

Descend.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 25-26-35 and 36, with brass cap, marked

T. 11 S. R. 10 E.



1912

raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Land, mountainous.

Soil, clay loam with loose rock, 24 ins. deep, 3rd rate.

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS
 Subsoil, gravel and loose rock.
 Timber, aspen and pine.
 Undergrowth, oak, service berry, sage brush and grass.
 Dense undergrowth on 80.00 chs.
 September 18: At this cor. I set off 1°48' N., on the decl.
 arc, and at 11h.54m., a.m., 1.m.t., observe the sun on the
 meridian, the resulting lat. is 39°50' N.
 West, on a sectional correction line
 Bet. secs. 26 and 35.
 Descend over mountainous land, through scattering timber
 and dense undergrowth.
 9.30 Hollow, 150 ft. deep, course SW.
 Ascend.
 18.00 Spur, projects S.
 Descend.
 29.30 Hollow, 150 ft. deep, course SE.
 Ascend, abruptly.
 29.60 Leave scattering timber, bears N. and S.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 26
 S 65
 1912
 raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
 43.50 Ridge, 400 ft. high, bears N. and S.
 Descend.
 45.00 Hollow, 50 ft. deep, course N.
 Ascend.
 70.00 Ridge; bears NW. and SE.
 Descend.
 80.00 Set an iron post, 3 ft. long; 2 ins. in diam., 24 ins. in the
 ground, for the cor. of secs. 26-27-34 and 35, with brass
 cap, marked

T 11 S R 10 E.

S 27	S 26
S 34	S 35

3121

CHAINS

from which

A cedar, 6 ins. diam., bears S. 11° 30' W., 171 lks. dist
marked T 11 S R 10 E S 34 BT.

A cedar, 6 ins. diam., bears N. 41° 30' W., 19 lks. dist
marked T 11 S R 10 E S 27 BT.

No other trees available, raise a mound of stone, 2 ft. base
1 1/2 ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and gravel, 24 ins. deep, 2nd rate.

Subsoil, gravel and loose rock.

Timber, aspen and pine.

Undergrowth, oak, service berry, choke cherry, buck brush,
sage brush and grass.

Dense undergrowth on 80.00 chs.

September 18, 1912.

Sept. 19: At 7h. 54m., a.m., l.m.t., I set off 39° 50' N., on the
lat. arc, 1° 30' N., on the decl. arc, and determine a meridian
with the solar at the cor. of secs. 26-27-34 and 35.

Thence I run

West, on a sectional correction line
Bet. secs. 27 and 34.

Descend over mountainous land, through scattering timber
and dense undergrowth.

- 8.40 Hollow, 300 ft. deep, course SW.
Ascend. Leave scattering timber, bears NW. and SE.
- 13.30 Spur, projects SW.
Descend. abruptly.
- 27.50 Willow Creek, 10 lks. wide, 4 ins. deep, in Willow Creek Canyon
500 ft. deep, course SE.
Ascend.
- 31.50 County Road, Colton to Theodore, bears NW. and SE.
- 38.75 S. edge of a circular sheep corral, bears N. 1.50 chs. dist
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
ground, for the 1/4 sec. cor., with brass cap, marked

1/4 S 27

S 34

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
 49.00 Irrigation ditch, 8 lks. wide, 2 ft. deep, course SE.
 69.40 Enter dense growth of aspen, bears N. and S.
 71.00 Leave aspen, bears N. and S.
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 27-28-33 and 34, with brass cap, marked

T 11 S R 10 E.

S 28	S 27
S 33	S 34

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
 Land, mountainous.

Soil, clay loam and gravel, 24 ins. deep, 2nd rate.

Subsoil, gravel and loose rock.

Timber, aspen and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavy timber on 1.60 chs. Dense undergrowth on the rest.

September 19: At this cor. I set off 1°25'N., on the decl. arc, and at 11h.54m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is 39°50'N.

West, on a sectional correction line,

Bet. secs. 28 and 33.

Ascend over mountainous land, through dense undergrowth.

50 Ridge, bears NE. and SW.

Descend.

10.00 Hollow, 100 ft. deep, course NW.

Ascend.

19.25 Spur, projects NE.

Descend.

32.00 Hollow, 100 ft. deep, course NE.

Ascend.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

46.00 Spur, projects NE.

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 28

S 33

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Descend.

70.00 Head of hollow, 100 ft. deep, course NE.

Ascend.

72.30 Old road, bears NW. and SE.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 28-29-32 and 33, with brass cap, marked

T 11 S R 10 E

S 29 | S 28

S 32 | S 33

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, mountainous.

Soil, rich clay loam, 36 ins. deep, 1st rate.

Subsoil, gravel.

No timber.

Undergrowth, oak, service berry, buck brush, choke cherry, sage brush and grass.

Dense undergrowth on 80.00 chu.

September 19, 1912.

September 20; At 7a.53m., a.m., l.m.t., I set off $39^{\circ}50'N.$ on the lat. arc, $1^{\circ}06'N.$, on the decl. arc, and determine with the solar a meridian, at the cor. of secs. 28-29-32 and 33.

Thence I run

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

West, on a sectional correction line,
Bet. secs. 29 and 32.

Ascend over mountainous land, through dense undergrowth.

5.20 Enter heavy growth of aspen, bears N. and S.

8.50 Leave heavy aspen, bears same.

9.40 Ridge, bears NW. and SE.

Descend abruptly.

24.70 Head of hollow, 300 ft. deep, course SW.

Ascend.

29.90 Spur, projects S.

Descend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the
ground, surrounded by a mound of earth and stone, for the
¼ sec. cor., with brass cap, marked

¼ S 29

—
S 32

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

Note: On account of natural obstacles it is impossible
to set this cor. over 14 ins. in the ground.

53.70 Hollow, 275 ft. deep, course S.

Ascend.

66.00 Spur, projects S.

Descend.

79.00 Hollow, 300 ft. deep, course SE.

Ascend.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the
ground, for the cor. of secs. 29-30-31 and 32, with brass
cap, marked

T 11 S R 10 E

S 30 | S 29

S 31 | S 32

1912

dig pits, 18x18x12 ins., in each sec., 5½ ft. dist., and raise

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
 Land, mountainous.
 Soil, clay loam and sand, 24 ins. deep, 2nd rate.
 Subsoil, gravel and loose rock.
 Timber, aspen.
 Undergrowth, oak, service berry, choke cherry, buck brush
 sage brush and grass.
 Heavy timber on 3.30 chs.
 September 20: At this cor. I set off $1^{\circ}02'N.$, on the decl
 arc, and at 11h.53m., a.m., 1.m.t., observe the sun on the
 meridian, the resulting lat. is $39^{\circ}50'N.$

West, on a sectional correction line,
 Bet. secs. 30 and 31.

12.50 Ascend over mountainous land, through dense undergrowth.
 Ridge, bears NW. and SE.

Descend.

29.50 Hollow, 150 ft. deep, course S.

Ascend.

32.80 Spur, projects S.

Descend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 30

S 31

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

42.80 Hollow, 100 ft. deep, course SE.

Ascend.

50.00 Ridge, bears NW. and SE.

Descend. abruptly.

76.25 Hollow, 500 ft. deep, course S.

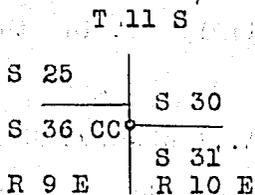
CHAINS

Ascend.

80.95

Intersect the W.bdy.of the Tp.2.63 chs.S.of the cor.of secs.25-30-31 and 36, heretofore described.

Set an iron post,3 ft.long,2 ins.in diam.,20 ins.in the ground,surrounded by a mound of earth and stone,for the closing cor.of secs.30 and 31,with brass cap,marked



1912

raise a mound of stone,2 ft.base,1½ ft.high,E.of cor.

Note: On account of natural obstacles it is impossible to set this cor.over 20 ins.in the ground.

I destroy all markings on the cor.of secs.25-30-31 and 36,pertaining to 'R.10 E.'

Land,mountainous.

Soil,clay loam and gravel,12 ins.deep,3rd rate.

Subsoil,gravel and loose rock.

No,timber.

Undergrowth,oak,service berry,buck brush,sage brush and grass.

Dense undergrowth on 80.95 chs.

September 20,1912.

John R Stewart
U.S.Surveyor.

Survey commenced September 18,1912,and executed with the instrument described in book "A"of this survey.

I examine the adjustments of the transit and correct the level and collimation errors:then,to test the solar apparatus,by comparing its indications,resulting from solar observations made during a.m.and p.m.hours,with a

CHAINS

meridian determined by observations on Polaris, I proceed as follows:

At the cor. of secs. 25-26-35 and 36, T.11 S., R.10 E., heretofore described, in approximate latitude $39^{\circ}49'32''$ N., longitude $110^{\circ}47'35''$ W., I set off $39^{\circ}50'$ N., on the lat. arc, $1^{\circ}45'$ N., on the decl. arc, and at 3h.54m., p.m., l.m.t. determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of the cor.

At 7h.43m., p.m., l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

September 18, 1912.

September 19: At 7 a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ}31'$ to the west, and mark the meridian thus determined, by cutting a small groove in the stone set Sept. 18, on which the meridian falls 0.4 ins. east of the mark determined by the solar.

At 7h.54m. a.m., l.m.t., I set off $39^{\circ}50'$ N., on the lat. arc, $1^{\circ}30'$ N., on the decl. arc, and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark falls 0.3 ins. east of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations, define positions for meridians, respectively about $0'21''$ west and $0'16''$ east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h.30m., a.m. is $N. 16^{\circ}45'$ W., the angle thus determined gives the mag. decl. $16^{\circ}45'$ E.

From the cor. of secs. 25-26-35 and 36,

I run

$S. 0^{\circ}01'$ E., on a random line

CHAINS

Bet. secs. 35 and 36.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.00 Intersect the Offset for the Second Standard Parallel S.,
 4 lks. W. of the stand cor. of secs. 35 and 36.
 Thence I run
 N. $0^{\circ}03'W.$, on a true line

Bet. secs. 35 and 36.

Ascend over mountainous land, through dense undergrowth.

23.70 Enter scattering timber, bears NE. and SW.

39.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 35 S 36
 1912
 raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

41.00 Spur, projects SW.
 Descend.

49.00 Hollow, 100 ft. deep, course SW.
 Ascend abruptly.

67.00 Ridge, 730 ft. high, bears NE. and SW.
 Descend abruptly.

79.00 The cor. of secs. 25-26-35 and 36.
 Land, mountainous.
 Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd
 rate.
 Subsoil, gravel and loose rock.
 Timber, pine.
 Undergrowth, oak, service berry, buck brush, sage brush and
 grass.
 Dense undergrowth on 79.00 chs.
 September 19: At this cor. I set off $1^{\circ}25'N.$, on the decl.
 arc, and at 11h. 54m., a.m., l.m.t. observe the sun on the
 meridian, the resulting lat. is $39^{\circ}50'N.$

N. $0^{\circ}01'W.$, bet. secs. 25 and 26.
 Descend over mountainous land, through scattering timber

CHAINS

and dense undergrowth.

1.50 Enter heavy growth of aspen, bears NE. and SW.

6.45 Hollow, 200 ft. deep, course SW.

Ascend. Leave aspen, bears NE. and SW.

32.90 Ridge, 600 ft. high, bears NE. and SW.

Descend .

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 26	S 25
--------------------	------

1912

from which

An aspen, 4 ins. diam., bears N. 37° 30' E., 120 lks. dist. marked $\frac{1}{4}$ S 25 BT.

An aspen, 5 ins. diam., bears N. 13° W., 129 lks. dist. marked $\frac{1}{4}$ S 26 BT.

41.00 Enter heavy timber, bears NE. and SW.

50.32 Fault, in side of the mountain, 320 lks. wide, 50 ft. deep, extends about 35 chs. NE. and 20 chs. S. 45° W.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 23-24-25 and 26, with brass cap, marked

T 11 S R 10 E

S 23	S 24
------	------

S 26	S 25
------	------

1912

from which

An aspen, 4 ins. diam., bears N. 83° E., 12 lks. dist. marked T 11 S R 10 E S 24 BT.

An aspen, 5 ins. diam., bears S. 30° E., 10 lks. dist. marked T 11 S R 10 E S 25 BT.

An aspen, 4 ins. diam., bears S. 42° 30' W., 31 lks. dist. marked T 11 S R 10 E S 26 BT.

An aspen, 4 ins. diam., bears N. 31° 30' W., 14 lks. dist. marked T 11 S R 10 E S 23 BT.

Land, mountainous.

CHAINS

Soil, clay and gravel with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen, pine and spruce.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavy timber on 43.95 chs.

September 19, 1912.

September 20; At 7h.53m., a.m., l.m.t., I set off $39^{\circ}50'N.$, on the lat. arc, $1^{\circ}06'N.$, on the decl. arc, and determine a meridian with the solar at the cor. of secs. 23-24-25 and 26.

Thence I run

East, on a random line,

Bet. secs. 24 and 25.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.94 Intersect the E. bdy. of the Tp. 2 lks. S. of the cor. of secs. 19-24-25 and 30, heretofore described.

Thence I run

$S.89^{\circ}59'W.$, on a true line

Bet. secs. 24 and 25.

Descend over mountainous land, through heavy timber.

1.50 Leave heavy timber, bears N. and S. Enter scattering timber and dense undergrowth.

4.50 Enter heavy growth of aspen, bears N. and S.

13.40 Head of hollow, 50 ft. deep, course N.

Ascend.

17.75 Leave aspen, bears N. and S.

20.25 Spur, projects N.

Descend.

27.40 Enter heavy growth of aspen, bears NW. and SE.

33.50 Leave aspen, bears NE. and SW.

39.97 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

CHAINS

$\frac{1}{2}$ S 24

S 25

1912'

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

42.25 Enter heavy growth of aspen, bears N. and S.

44.00 Hollow, 400 ft. deep, course NE.

Ascend.

79.94 The cor. of secs. 23-24-25 and 26.

Land, mountainous.

Soil, clay and gravel, with loose rock, 24 ins. deep, 3rd m

Subsoil, gravel and loose rock.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 58.54 chs.

September 20: At this cor. I set off $1^{\circ}02'N.$, on the dec arc, and at 11h. 53m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}50'N.$

$N.0^{\circ}01'W.$, bet. secs. 23 and 24.

Descend over mountainous land, through heavy timber.

22.60 Leave timber, bears SE. and NW. Enter scattering timber and dense undergrowth.

23.80 Stream of fresh water, 3 lks. wide, 4 ins. deep, in bottom hollow, 400 ft. deep, course NE.

Ascend abruptly over broken ledges.

38.30 Rocky spur, projects SE.

Descend abruptly over broken ledges.

39.88 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the witness $\frac{1}{4}$ sec. cor., with brass cap, marked

T 11 S R 10 E

S 23 | S 24

WC $\frac{1}{4}$

1912

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

from which

A pine, 8 ins. diam., bears N. 19° 45' E., 57 lks. dist.,
marked WC $\frac{1}{4}$ S. 24 BT.

A spruce, 10 ins. diam., bears N. 9° 25' W., 310 lks. dist.,
marked WC $\frac{1}{4}$ S. 23 BT.

40.00 Point for $\frac{1}{4}$ sec. cor. falls on ledge, impossible to set the
cor.

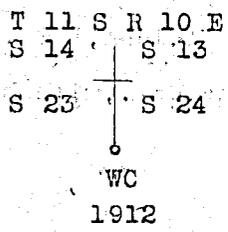
54.60 Hollow, 250 ft. deep, course NW.
Ascend.

65.00 Spur, projects NW.
Descend.

73.20 Hollow, 50 ft. deep, course W.
Ascend.

75.60 Spur, projects W.
Descend.

79.30 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the
ground, for the witness cor. to secs. 13-14-23 and 24, with
brass cap, marked



from which

A pine, 12 ins. diam., bears S. 33° E., 196 lks. dist.,
marked WC T 11 S R 10 E S 24 BT.

no other trees available, raise a mound of stone, 2 ft.
base, 1 1/2 ft. high, W. of cor.

80.00 Point for the cor. of secs. 13-14-23 and 24, falls in the
middle of the county road, Colton to Theodore, bears NE.
and SW. Cor. not set.

Land, mountainous.

Soil, clay and gravel, with loose rock, 24 ins. deep, 3rd
rate.

Subsoil, gravel and loose rock,

Timber, aspen and pine.

CHAINS

Undergrowth, willows, choke cherry, service berry, buck brush, sage brush and grass.

Heavily timbered land on 22.60 chs.

September 20, 1912.

Sept. 21: At 7h. 53m., a.m., l.m.t., I set off $39^{\circ}51'N.$, on lat. arc, $0^{\circ}43'N.$, on the decl. arc, and determine a meridian

with the solar at the cor. of secs. 13-14-23 and 24.

Thence I run

$N.89^{\circ}59'E.$, on a random line

Bet. secs. 13 and 24.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.92 Intersect E. bdy. of Tp. 9 lks. N. of the cor. of secs. 13-18-19 and 24, heretofore described.

Thence I run

$N.89^{\circ}57'W.$, on a true line

Bet. secs. 13 and 24.

Descend over mountainous land, through heavy timber.

14.42 Stream of fresh water, 2 lks. wide, 4 ins. deep, in bottom hollow, 600 ft. deep, course SW.

Ascend abruptly. Leave heavy timber, bears NE. and SW. Enter dense undergrowth.

39.96 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 13

S 24

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

42.80 Ridge, 900 ft. high, bears N. and SW.

Descend abruptly.

79.67 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the witness cor. to secs. 13-14-23 and 24, with brass cap, marked

T 11 S R 10 E

S 14	S 13	WC
S 23	S 24	

1912

SUBDIVISIONS OF T.11 S., R.10 E.

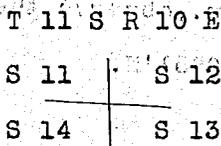
CHAINS

79.92 raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
 Point in road, for the cor. of secs. 13-14-23 and 24, cor. not set.
 Land, mountainous.
 Soil, clay loam with gravel, and loose rock, 24 ins. deep,
 3rd rate.
 Subsoil, gravel and loose rock.
 Timber, aspen and pine.
 Undergrowth, willows, service berry, buck brush, choke cherry,
 sage brush and grass.
 Heavily timbered land on 14.42 chs.
 September 21: At this cor. set off 0°38'N., on the decl.
 arc, and at 11h.53m., a.m., observe the sun on the meridian,
 the resulting lat. is 39°51'N.

N. 0°01'W., bet. secs. 13 and 14.
 Ascend along the county road,
 .50 Log bridge, 20 lks. long, 10 ft. wide, across Willow Creek,
 3 lks. wide, 5 ins. deep, in bottom of Willow Creek Canyon,
 1200 ft. deep, course SW.
 2.50 Leave road, bears S. and NE. Ascend gently along E. slope
 of spur.
 13.90 Bend in same road, bears NE. and SE. Ascend abruptly over
 mountainous land, through dense undergrowth and scattering
 timber.
 39.80 Spur, projects NE.
 Descend.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the
 ground, surrounded by a mound of earth and stone, for the
 ¼ sec. cor., with brass cap, marked
 ¼ S 14 | S 13 ✓
 1912
 from which
 A pine, 10 ins. diam., bears N. 49°E., 38 lks. dist.,
 marked ¼ S 13 BT.
 A spruce, 5 ins. diam., bears S. 12°30'W., 73 lks. dist.

CHAINS

marked $\frac{1}{4}$ S 14 BT.
 Note: On account of natural obstacles it is impossible to set this cor. over 18 ins. in the ground.
 43.25 Hollow, 200 ft. deep, course SE.
 Ascend.
 43.51 County road, Colton to Theodore, bears E. and W.
 44.80 A log cabin, 12x14 ft., bears W., 10 chs. dist.
 45.80 Same road, bears NE. and SW.
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 11-12-13 and 14, with brass



1912

from which

A spruce, 16 ins. diam., bears N. 25° E., 85 lks. dist. marked T 11 S R 10 E S 12 BT.

A spruce 6 ins. diam., bears S. 55° 30' E., 174 lks. dist. marked T 11 S R 10 E S 13 BT.

A pine, 14 ins. diam., bears S. 60° W., 107 lks. dist. marked T 11 S R 10 E S 14 BT.

A spruce, 8 ins. diam., bears N. 52° W., 100 lks. dist. marked T 11 S R 10 E S 11 BT.

Land, mountainous.

Soil, clay loam and gravel with loose rock, 24 ins. deep, 3 rate.

Subsoil, gravel and loose rock.

Timber, aspen and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Dense undergrowth on 80.00 chs.

September 21, 1912.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

Sept. 23: At 7h.52m., a.m., l.m.t., I set off $39^{\circ}52'N.$, on the lat. arc, $0^{\circ}04'S.$, on the decl. arc, and determine with the solar a meridian, at the cor. of secs. 11-12-13 and 14.

Thence I run

$S.89^{\circ}59'E.$, on a random line,

Bet. secs. 12 and 13.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.96 Intersect the E. bdy. of Tp. 9 lks. N. of the cor. of secs. 7-12-13 and 18, heretofore described.

September 23: At this cor. I set off $0^{\circ}08'S.$ on the decl. arc, and at 11h.52m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}52'N.$

Thence I run

$N.89^{\circ}55'W.$, on a true line

Bet. secs. 12 and 13.

Ascend over mountainous land, through scattering timber and dense undergrowth.

7.10 Ridge, bears N. and S.

Descend abruptly.

26.40 Stream of fresh water, 1 lk. wide, 2 ins. deep, in bottom of hollow, 550 ft. deep, course SE.

Ascend abruptly.

39.98 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 12

S 13

1912

from which

A pine, 10 ins. diam., bears $S.7^{\circ}W.$, 135 lks. dist., marked $\frac{1}{4}$ S 13 BT.

A pine, 5 ins. diam., bears $N.25^{\circ}W.$, 100 lks. dist., marked $\frac{1}{4}$ S 12 BT.

43.00 Enter heavy timber, bears NE. and SW.

45.00 Ridge, 600 ft. high, bears N. and S.

CHAINS

- Descend abruptly.
- 49.50 Leave heavy timber, bears NE. and SW. Enter scattering timber and dense undergrowth.
- 69.00 Willow Creek, 5 lks. wide, 6 ins. deep, in bottom of Willow Creek Canyon, 950 ft. deep, course S.
Ascend abruptly.
- 70.50 County road, Colton to Theodore, bears NE. and SW.
- 79.96 The cor. of secs. 11-12-13 and 14.
Land, mountainous.
Soil, clay loam with gravel and loose rock, 24 ins. deep, 3 rate.
Subsoil, gravel and loose rock.
Timber, pine and aspen.
Undergrowth, oak, service berry, buck brush, sage brush and grass.
Heavily timbered land on 6.50 chs.

September 23, 1912.

September 24: At 7h. 52m., a.m., l.m.t., I set off $39^{\circ}52'N$. on the lat. arc, $0^{\circ}27'S$., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 11-12-13 and 14.

Thence I run

$N. 0^{\circ}01'W$., bet. secs. 11 and 12.

Ascend over mountainous land, through scattering timber and dense undergrowth.

- 1.00 Enter heavy timber, bears NE. and SW.
- 17.95 Spur, projects SE.
Descend.
- 28.15 Hollow, 150 ft. deep, course SE.
Ascend. Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

CHAINS

1/4 S 11 | S 12

1912

from which

A pine, 8 ins. diam., bears N. 55° 30' W., 115 lks. dist.,
marked 1/4 S 11 BT.

A pine 12 ins. diam., bears N. 40° 30' E., 218 lks. dist.,
marked 1/4 S 12 BT.

- 42.50 Enter heavy pine and spruce timber, bears NE. and SW.
- 52.00 Leave heavy timber, bears SE. and NW. Enter scattering timber and dense undergrowth.
- 55.20 Intersect the S. bdy. of the Uintah Indian Reservation.
Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the closing cor. of secs. 11 and 12, with brass cap, marked

U I R
C C

S 11 | S 12

T 11 S R 10 E

1912

from which

A pine, 12 ins. diam., bears S. 24° 30' W., 267 lks. dist.,
marked T 11 S R 10 E S 11 BT.

A pine, 10 ins. diam., bears S. 6° 30' E., 184 lks. dist.,
marked T 11 S R 10 E S 12 BT.

From this closing cor. the 69 th mile cor. on the boundary bears as follows:

- N. 74° 30' E., 19.55 chs. to angle cor.
- S. 88° 30' E., 17.80 chs. to mile post No. 69.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush and sage brush,
Good growth of grass.

Heavily timbered land on 36.65 chs.

CHAINS

September 24: At this closing cor. I set off $0^{\circ}32'S.$, on the decl. arc, and at 11h.52m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}53'N.$

Knowing from the length of the line bet. secs. 11 and 12 that I will be unable to set the cor. of secs. 1-2-11 and 12.

I commence at the cor. of secs. 1-6-7 and 12, on E. bdy. of Tp. heretofore described, and run $N.89^{\circ}55'W.$, on a true line,

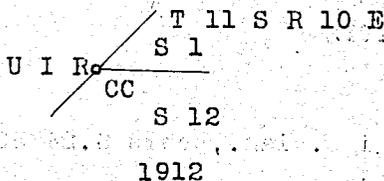
Bet. secs. 1 and 12.

Descend over mountainous land, through scattering timber and dense undergrowth.

1.70 Enter heavy timber, bears NW. and SE.

8.94 Intersect the S. bdy. of the Uintah Indian Reservation.

Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the closing cor. of secs. 1 and 12, with brass cap, marked



from which

An aspen, 4 ins. diam., bears $S.33^{\circ}E.$, 73 lks. dist., marked T 11 S R 10 E S 12 BT.

An aspen, 4 ins. diam., bears $N.89^{\circ}E.$, 77 lks. dist., marked T 11 S R 10 E S 1 BT.

from this closing cor. the 69th mile post, on the boundary bears as follows

$S.50^{\circ}30'W.$, 31.53 chs. to angle cor.,

$N.88^{\circ}30'W.$, 10.00 chs. to 69th mile cor.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

CHAINS

Undergrowth, service berry, buck brush, sage brush and grass.
Heavily timbered land on 7.24 chs.

September 24, 1912.

Claude L. Hest

U.S. Transitman.

September 21: At 7h.53m., a.m., l.m.t., I set off $39^{\circ}50'N.$,
on the lat. arc, $0^{\circ}43'N.$, on the decl. arc, and determine a
meridian with the solar at the cor. of secs. 26-27-34 and
35.

Thence I run
 $S.0^{\circ}01'E.$, on a random line
Bet. secs. 34 and 35.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

78.60 Intersect the offset for the second Standard Parallel S.,
12 lks. W. of the stand cor. of secs. 34 and 35.

Thence I run
 $N.0^{\circ}06'W.$, on a true line
Bet. secs. 34 and 35.

Descend over mountainous land, through dense undergrowth.

10.20 Willow Creek, 15 lks. wide, 4 ins. deep, in bottom of canyon,
100 ft. deep, course SE.

Ascend gradually in bottom of canyon.

11.10 Same creek, course SW.

11.65 Same creek, course SE.

18.60 Same creek, course SW.

20.10 Same creek, course SE.

Ascend from canyon.

29.50 Wash, 25 lks. wide, 10 ft. deep, course SW.

38.60 Set an iron post, 3 ft. long, 1 in. in diam., 26 in. in the
ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 34 | S 35

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS					
	raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.				
48.50	Wash, 1 ch. wide, 20 ft. deep, course SW.				
68.00	Wash, 90 lks. wide, 15 ft. deep, course SW.				
78.60	The cor. of secs. 26-27-34 and 35.				
	Land, mountainous.				
	Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.				
	Subsoil, gravel and loose rock.				
	No timber.				
	Undergrowth, oak, service berry, buck brush and sage brush.				
	Good growth of grass.				
	Dense undergrowth on 78.60 chs.				
	September 21: At this cor. I set off 0°38'N., on the decl. arc, and at 11h.53m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39°50'N.				
<hr/>					
	N. 0°01'W., bet. secs. 26 and 27.				
	Ascend over mountainous land, through scattering timber and dense undergrowth.				
5.95	Ridge, bears NW. and SE.				
	Descend.				
28.50	Head of hollow, 300 ft. deep, course NE.				
	Ascend.				
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the ¼ sec. cor., with brass cap, marked				
	<table border="0"> <tr> <td style="padding-right: 10px;">¼ S 27</td> <td style="border-left: 1px solid black; padding-left: 10px;">S 26</td> </tr> <tr> <td></td> <td style="text-align: center;">1912</td> </tr> </table>	¼ S 27	S 26		1912
¼ S 27	S 26				
	1912				
	raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.				
50.00	Ridge, bears NE. and SW.				
	Descend. abruptly.				
60.95	Foot of abrupt descent, enter Willow creek Canyon.				
	Leave scattering timber, bears NE. and SW.				
65.22	County road, Colton to Theodore, bears NE. and SW.				
68.55	Willow Creek, 4 lks. wide, 6 ins. deep, in bottom of Willow				

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

Creek Canyon, 375 ft. deep, course SW.

Ascend gradually.

70.00 Leave canyon, ascend abruptly.

75.45 Spur, projects NE.

Descend.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 22-23-26 and 27, with brass cap, marked

T 11 S R 10 E ✓

S 22	S 23
S 27	S 26

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and gravel with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Dense undergrowth on 80.00 chs.

September 21, 1912.

September 23: At 7h. 52m., a.m., l.m.t., I set off 39°50'N., on the lat. arc, 0°04'S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 22-23-26 and 27.

Thence I run

East, on a random line

Bet. secs. 23 and 26.

40.00 Set temp. ¼ sec. cor.

79.98 Intersect N. and S. line, 10 lks. S. of the cor. of secs. 23-24-

25. and 26.

Thence I run

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS	
	S. 89°56'W., on a true line Bet. secs. 23 and 26. Ascend over mountainous land, through heavy growth of aspen.
1.10	Leave aspen, bears E. and W. Enter dense undergrowth.
4.50	Enter heavy growth of aspen, bears SW. and NE.
16.40	Leave heavy growth of aspen, bears NE. and SW. Enter dense undergrowth.
18.25	Spur, projects NE. Descend.
36.00	Hollow, 200 ft. deep, course NE. Ascend.
39.99	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\frac{1}{4}$ S 23

	S 26.
	1912
	raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
46.10	Spur, projects N. Descend.
47.40	Hollow, 100 ft. deep, course N. Ascend.
50.90	Spur, projects NE. Descend.
60.70	Enter heavy growth of aspen, bears NE. and SW.
71.50	Foot of descent. Enter Willow Creek Canyon. Leave aspen brs. NE. and SW. Enter dense undergrowth.
72.80	Willow Creek, 4 lks. wide, 4 ins. deep, in bottom of Willow Creek Canyon, 250 ft. deep, course SW. Ascend gradually in forks of canyon.
75.00	County road, Colton to Theodore, bears NE. and SW.
77.90	Stream of fresh water, 2 lks. wide, 3 ins. deep, in bottom of hollow, course SE.
77.95	Enter dense growth of willows, bears NW. and SE.
79.90	Leave willows, bears same, enter dense undergrowth.

. SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

Ascend abruptly.

79.98 The cor. of secs. 22-23-26 and 27.

Land, mountainous.

Soil, clay loam and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, willows, sage brush and grass.

Heavily timbered land on 25.75 chs.

September 23: At this cor. I set off $0^{\circ}08'S.$, on the decl. arc, and at 11h.52m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}50'N.$

N. $0^{\circ}01'W.$, bet. secs. 22 and 23.

Descend over mountainous land, through dense undergrowth.

1.10 Creek, 2 lks. wide, 3 ins. deep, in bottom of hollow, 150 ft. deep, course SE.

Ascend.

4.00 Ascend abruptly.

12.00 Enter scattering timber, bears NW. and SE.

16.40 Spur, projects SW.

Descend.

31.90 Hollow, 150 ft. deep, course SW.

Ascend, abruptly.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 22 | S 23

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

67.00 Ridge, 575 ft. high, bears NE. and SW.

Descend abruptly.

78.15 Enter heavy timber, bears NE. and SW.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 14-15-22 and 23, with brass

cap marked

CHAINS

T 11 S R 10 E ✓	
S 15	S 14
S 22	S 23

1912

from which

A pine, 10 ins. diam., bears N. 57° E., 11 lks. dist., marked T 11 S R 10 E S 14 BT.

A spruce, 10 ins. diam., bears S. 73° 30' E., 15 lks. dist. marked T 11 S R 10 E S 23 BT.

A spruce, 12 ins. diam., bears S. 37° W., 16 lks. dist., marked T 11 S R 10 E S 22 BT.

A spruce, 12 ins. diam., bears N. 78° 30' W., 18 lks. dist. marked T 11 S R 10 E S 15 BT.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, spruce, pine and aspen.

Undergrowth, oak, willows, service berry, choke cherry, buck brush, sage brush and grass.

Heavily timbered land on 1.85 chs. dense undergrowth on the rest.

September 23, 1912.

September 24: At 7h. 52m., a.m., l.m.t., I set off 39° 51' N., on the lat. arc, 0° 27' S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 14-15-22 and 23.

Thence I run

N. 89° 56' E., on a random line

bet. secs. 14 and 23.

40.00 Set temp. & sec. cor.

80.08 Intersect N. and S. line, 7 lks. S. of the true point for the cor. of secs. 13-14-23, and 24.

CHAINS

September 24: At this point I set off $0^{\circ}32'S$. on the decl. arc, and at 11h.52m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}51'N$.

Thence I run S. $89^{\circ}53'W$, on a true line
Bet. secs. 14 and 23.

Descend gradually in bottom of canyon, through dense undergrowth.

35 Willow Creek, 3 lks. wide, 5 ins. deep, in bottom of Willow Creek Canyon, 1200 ft. deep, course SW.

Ascend abruptly. Enter scattering timber, bears NE. and SW.

6.25 Spur, projects SE.

Descend.

15.30 Hollow, 150 ft. deep, course SE.

Ascend.

25.00 Enter heavy growth of aspen, bears NE. and SW.

27.25 Leave aspen, bears N. and S.

28.70 Spur, projects SE.

Descend abruptly.

40.04 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 14°

S 23

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

45.00 Hollow; 750 ft. deep, course SE.

Ascend abruptly.

57.70 Ridge, bears N. and SW.

Descend.

65.40 Head of hollow, 150 ft. deep, course S.

Ascend.

73.00 Ridge, bears NE. and SW.

Descend.

77.50 Enter heavy timber, bears NE. and SW.

80.08 The cor. of secs. 14-15-22 and 23.

CHAINS

Land, mountainous.

Soil, clay and gravel with loose rock, 24 ins, deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 4.83 chs.

September 24, 1912.

September 25: At 7h.52m., a.m., l.m.t., I set off $39^{\circ}51'N.$, on the lat. arc, $0^{\circ}50'S.$, on the decl. arc, and determine a meridian, with the solar at the cor. of secs. 14-15-22 and 23.

Thence I run

$N.0^{\circ}01'W.$, bet. secs. 14 and 15.

Descend over mountainous land, through heavy timber.

3.50 Head of hollow, 300 ft. deep, course SW.

Ascend. Leave timber, bears NE. and SW. Enter dense undergrowth

10.00 Spur, projects SW.

Descend.

20.00 Enter heavy timber, bears NE. and SW.

28.60 Hollow, 180 ft. deep, course SW.

Ascend, Leave heavy timber, bears NE. and SW. Enter scattering timber and dense undergrowth.

38.00 Spur, projects SW.

Descend. Enter heavy timber, bears E. and W.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 15 | S 14
 1912

from which

A spruce, 10 ins. diam., bears $N.77^{\circ}E.$, 15 lks. dist., marked $\frac{1}{4}$ S 14 BT.

A spruce, 8 ins. diam., bears $N.70^{\circ}W.$, 8 lks. dist., marked $\frac{1}{4}$ S 15 BT.

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

September 25: At this cor. I set off $\phi^{\circ}55'S.$, on the decl. arc, and at 11h.52m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}52'N.$

41.00 Hollow, 100 ft. deep, course SW.
Ascend.

42.00 Leave heavy timber, bears E. and W. Enter scattering timber and dense undergrowth.

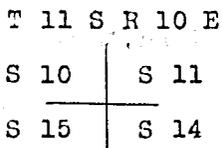
58.00 Enter timber, bears NE. and SW.

59.20 Spur, projects SW.
Descend.

75.70 Stream of fresh water, 2 lks. wide, 2 ins. deep, in bottom of hollow, 150 ft. deep, course SW.
Ascend.

76.50 Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.

80.00 Spur, projects SE.
Set an iron post, 3 ft. long, 2 ins. in diam., 18 ins. in the ground, surrounded by a mound of earth and stone, for the cor. of secs. 10-11-14 and 15, with brass cap, marked



1912

from which

A spruce, 14 ins. diam., bears $N.85^{\circ}15'E.$, 70 lks. dist., marked T 11 S R 10 E S 11 BT.

A spruce, 10 ins. diam., bears $S.75^{\circ}45'W.$, 58 lks. dist., marked T 11 S R 10 E S 15 BT.

no other trees available, raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 18 ins. in the ground.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

CHIEFS

Timber, pine, spruce and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 34.60 chs.

September 25, 1912.

September 26: At 7h.51m., a.m., l.m.t., I set off $39^{\circ}52'N.$, on the lat.arc, $1^{\circ}13'S.$, on the decl.arc, and determine with the solar a meridian, at the cor.of secs.10-11-14 and 15.

Thence I run

$N.89^{\circ}53'E.$, on a random line

Bet.secs.11 and 14.

40.00 Set temp. $\frac{1}{4}$ sec.cor.

80.16 Intersect N.and S.line, 6 lks.S.of the cor.of secs.11-12-13 and 14.

Thence I run

$S.89^{\circ}50'W.$, on a true line

Bet.secs.11 and 14.

Ascend over mountainous land, through scattering timber and dense undergrowth.

4.80 Spur, projects SE.

Descend.

16.70 Hollow, 350 ft.deep, course SE.

Ascend abruptly.

21.30 Spur, projects SE.

Descend.

29.50 Hollow, 150 ft.deep, course SE.

Ascend.

40.08 Set an iron post, 3 ft.long, 1 in.in dia, 26 ins.in the ground, for the $\frac{1}{4}$ sec.cor., with brass cap, marked

$\frac{1}{4}$ S 11

S 14

1912

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

from which

A pine, 15 ins. diam., bears S. 69° E., 146 lks. dist.,
marked $\frac{1}{4}$ S 14 BT.

A pine, 28 ins. diam., bears N. 21° 30' E., 44 lks. dist.,
marked $\frac{1}{4}$ S 11 BT.

43.00 Enter heavy timber, bears N. and S.

49.50 Ridge, bears NE. and SW.

Descend abruptly.

62.00 Leave heavy timber, bears NE. and SW. Enter scattering timber
and dense undergrowth.

75.65 Stream of fresh water, 2 lks. wide, 2 ins. deep, in bottom of
hollow, 680 ft. deep, course SW.

Ascend abruptly.

80.16 The cor. of secs. 10-11-14 and 15.

Land, mountainous.

Soil, clay loam and gravel, with loose rock, 24 ins. deep, 3rd
rate.

Subsoil, gravel and loose rock.

Timber, aspen, spruce and pine.

Undergrowth, oak, service berry, buck brush, sage brush and
grass.

Heavily timbered land on 19.00' chs.

September 26: At this cor. I set off 1° 18' S., on the decl.
arc, and at 11h. 51m., a.m., 1.m.t., observe the sun on the
meridian, the resulting lat. is 39° 52' N.

N. 0° 01' W., bet. secs. 10 and 11.

Ascend along E. slope of spur, over mountainous land, through
scattering timber and dense undergrowth.

16.60 Enter heavy timber, bears NE. and SW.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 10 | S 11

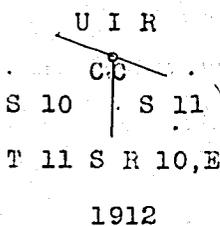
CHAINS

from which

A pine, 8 ins. diam., bears S. 3° E., 32 lks. dist.,
marked $\frac{1}{4}$ S 11 BT.

A spruce, 14 ins. diam., bears N. 28° W., 192 lks. dist.,
marked $\frac{1}{4}$ S 10 BT.

55.25 Intersect the S. bdy. of the Uintah Indian Reservation.
Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the
ground, for the closing cor. for secs. 10 and 11, with brass
cap, marked



from which

An aspen, 10 ins. diam., bears S. 12° E., 74 lks. dist.,
marked T 11 S R 10 E S 11 BT.

A pine, 10 ins. diam., bears S. 62° W., 54 lks. dist.,
marked T 11 S R 10 E S 10 BT.

From this closing cor. the 70th mile post on the boundary
bears

S. 55° 15' E., 28.07 chs. to the angle cor.

N. 74° 30' E., 17.00 chs. to the mile post, No. 70.

Land, mountainous.

Soil, clay loam and gravel, with loose rock, 24 ins. deep, 3rd
rate.

Subsoil, gravel and loose rock.

Timber, pine, spruce and aspen.

Heavily timbered land on 38.65 chs.

September 26, 1912.

John D. Stewart
U.S. Surveyor.

CHAINS

September 25: At 7h.52m., a.m., l.m.t., I set off 39°50'N., on the lat.arc, 0°50'S., on the decl.arc, and determine a meridian with the solar at the cor.of secs.27-28-33 and 34.

Thence I run

S.0°02'E., on a random line

Bet.secs.33 and 34.

40.00 Set temp. 1/4 sec. cor.

77.30 Intersect the offset for the second Standard Parallel S., 14 lks.W.of the Stand.cor.of secs.33 and 34.

Thence I run

N.0°08'W., on a true line

Bet.secs.33 and 34.

Ascend over mountainous land, through dense undergrowth.

9.45 Irrigation ditch, 8 lks.wide, 2 ft.deep, course SW.

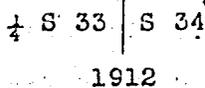
22.70 Irrigation ditch, 8 lks.wide, 2 ft.deep, course SW.

34.20 Enter scattering timber, bears NW.and SE.

36.80 Ridge, bears NE.and SW.

Descend.

37.30 Set an iron post, 3 ft.long, 1 in.in diam., 14 ins.in the ground, surrounded by a mound of earth and stone, for the 1/4 sec.cor., with brass cap, marked



raise a mound of stone, 2 ft.base, 1 1/2 ft.high, W.of cor.

Note: On account of natural obstacles it is impossible to set this post over 14 ins.in the ground.

40.00 Hollow, 40 ft.deep, course NE.

Ascend.

54.70 Spur, projects NE.

Descend.

68.40 Head of hollow, 100 ft.deep, course W.

Ascend.

77.30 The cor.of secs.27-28-33 and 34.

Land, mountainous.

Soil, clay and gravel with loose rock, 24 ins.deep, 3rd rate.

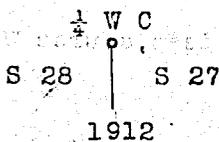
CHAINS

Subsoil, gravel and loose rock.
 Timber, aspen.
 Undergrowth, oak, service berry, buck brush, sage brush and grass.
 Dense undergrowth on 77.30 chs.
 September 25: At this cor. I set off $0^{\circ}55'S.$, on the decl. arc, and at 11h.52m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}50'N.$

$N.0^{\circ}02'W.$, bet. secs. 27 and 28.
 Ascend over mountainous land, through dense undergrowth.

- 2.00 Spur, projects NE.
Descend.
- 12.80 Enter heavy growth of aspen, bears E. and W.
- 17.20 Leave aspen, bears E. and W. Enter dense undergrowth.
- 22.20 Enter dense growth of aspen, bears E. and W.
- 23.30 Leave aspen, bears E. and W. Enter dense undergrowth.
- 27.65 Irrigation ditch, 8 lks. wide, 2 ft. deep, course SE.
- 28.50 Same ditch, bears SW. Continue N. along the centre of the ditch.
- 31.75 Leave ditch.
- 40.00 Point, for the $\frac{1}{4}$ sec. cor. falls in stream, 4 lks. wide, 2 ins. deep, in bottom of the left hand fork of Willow Creek Canyon 400 ft. deep, course SE. Cor. not set.
Ascend.
- 40.30 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the witness $\frac{1}{4}$ sec. cor., with brass cap, marked

T 11 S R 10 E



raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

- 41.80 Old road, bears NW. and SE.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

79.00 Ridge, bears NW. and SE.

Descend.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 21-22-27 and 28, with brass cap, marked

T 11 S R 10 E

S 21	S 22
S 28	S 27

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 5.50 chs.

September 25, 1912.

September 26 : At 7h. 51m., a.m. 1.m.t., I set off 39°50'N., on the lat. arc, 1°13'S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 21-22-27 and 28.

Thence I run

East, on a random line

Bet. secs. 22 and 27.

40.00 Set temp. ¼ sec. cor.

80.06 Intersect N. and S. line, 5 lks. S. of the cor. of secs. 22-23-26 and 27.

Thence I run

S. 89°58'W., on a true line.

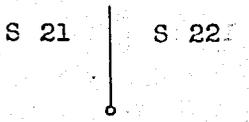
Bet. secs. 22 and 27.

Ascend over mountainous land, through dense undergrowth.

CHAINS

- 7.00 Ascend abruptly.
- 27.40 Ridge, bears NW. and SE.
Descend.
- 40.03 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 22 ✓
-
- S 27
- 1912
- raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 50.90 Hollow, 270 ft. deep, course SE.
Ascend.
- 80.06 The cor. of secs. 21-22-27 and 28.
Land, mountainous.
Soil, clay and gravel with loose rock, 24 ins. deep, 3rd rate.
Subsoil, gravel and loose rock.
No timber.
Undergrowth, oak, service berry, buck brush, sage brush and grass.
Dense undergrowth on 80.06 chs.
- September 26: At this cor. I set off $1^{\circ}18'S.$, on the decl. arc, and at 11h.51m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}50'N.$
-
- N. $0^{\circ}02'W.$, bet. secs. 21 and 22.
- Descend over mountainous land, through dense undergrowth.
- 39.85 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground, surrounded by a mound of earth and stone, for witness $\frac{1}{4}$ sec. cor., with brass cap, marked

T 11 S R 10 E. ✓



SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 18 ins. in the ground.

40.00 Point for the $\frac{1}{4}$ sec. cor., falls in bottom of a hollow, 175 ft. deep, course W. Corner not set.

Ascend.

52.35 Spur, projects E.

Descend. abruptly. Enter heavy timber bears E. and W.

56.00 Hollow, 250 ft. deep, course SE.

Ascend.

61.40 Leave heavy timber, bears NW. and SE. Enter dense undergrowth.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 15-16-21 and 22, with brass cap, marked

T 11 S R 10 E

S 16 | S 15

S 21 | S 22

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam and gravel, with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, Oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 9.05 chs.

September 26, 1912.

September 27: At 7h. 51m., a.m., l.m.t., I set off $39^{\circ}51'N.$, on the lat. arc, $1^{\circ}37'S.$ on the decl. arc, and determine a meridian with the solar at the cor. of secs. 15-16-21 and 22. Thence I run

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

N.89°58'E., on a random line
 Bet.secs.15 and 22.

40.00 Set temp. $\frac{1}{4}$ sec.cor.

80.02 Intersect N.and S.line, 14 lks.N.of the cor.of secs.14-15-22 and 23.

September 27: At this cor.I set off 1°42'S., on the decl. arc, and at 11h.51m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat.is 39°51'N.

Thence I run
 N.89°56'W., on a true line
 Bet.secs.15 and 22.

Descend over mountainous land, through heavy timber.

14.40 Stream of fresh water, 2 lks.wide, 2 ins.deep, in bottom of hollow, 400 ft.deep, course SW.

Ascend abruptly.Leave heavy timber, bears NE.and SW.Enter scattering timber and dense undergrowth.

28.50 Spur, projects SE.
 Descend.abruptly.

39.80 Stream of fresh water, 2 lks.wide, 3 ins.deep, in bottom of hollow, 300 ft.deep, course SE.

Ascend abruptly.Enter heavy timber, bears NW. and SE.

40.01 Set an iron post, 3 ft.long, 1 in.in diam., 26 ins.in the ground, for the $\frac{1}{4}$ sec.cor., with brass cap, marked

$\frac{1}{4}$ S 15

S 22

1912

from which

A pine, 6 ins.diam., bears S.6°W., 38 lks.dist., marked $\frac{1}{4}$ S 22 BT.

An aspen, 8 ins.diam., bears N.81°30'W., 18 lks.dist., marked $\frac{1}{4}$ S 15 BT.

73.00 Leave heavy timber, bears NW. and SE. Enter dense undergrowth

76.00 Ridge, bears NW. and SE.
 Descend.

80.02 The cor.of secs.15-16-21 and 22.

CHAINS

Land, mountainous.
 Soil, clay and gravel with loose rock, 24 ins. deep, 3rd rate.
 Subsoil, gravel and loose rock.
 Timber, aspen, spruce and pine.
 Undergrowth, oak, service berry, buck brush, sage brush and grass.
 Heavily timbered land on 47.60 chs.

September 27, 1912.

September 28: At 7h.51m., a.m., l.m.t., I set off $39^{\circ}51'N.$, on the lat. arc, $2^{\circ}00'S.$, on the decl. arc, and determine a meridian with the solar at the cor. of secs. 15-16-21 and 22.

Thence I run
 $N.0^{\circ}02'W.$, bet. secs. 15 and 16.

Ascend over mountainous land, through dense undergrowth.

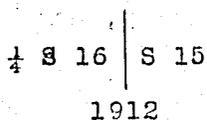
4.20 Ridge, bears NE. and SW.

Descend.

23.90 Enter heavy timber, bears NW. and SE.

34.00 Descend abruptly.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked



from which

A pine, 7 ins. diam., bears $S.25^{\circ}30'E.$, 20 lks. dist., marked $\frac{1}{4} S 15 BT.$

A spruce, 18 ins. diam., bears $N.60^{\circ}30'W.$, 45 lks. dist., marked $\frac{1}{4} S 16 BT.$

September 28: At this cor. I set off $2^{\circ}05'N.$, on the decl. arc, and at 11h.51m., a.m., l.m.t., observe the sun on the meridian the resulting lat. is $39^{\circ}52'N.$

62.60 Hollow, 250 ft. deep, course SE.

Ascend.

SUBDIVISIONS OF T.11 S.,R.10 E.

CHAINS

- 67.50 Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 9-10-15 and 16, with brass cap, marked

T 11 S R 10 E

S 9	S 10
-----	------

S 16	S 15
------	------

1912

from which

A spruce, 12 ins. diam., bears N. 27° E., 90 lks. dist., marked T 11 S R 10 E S 10 BT.

A spruce, 14 ins. diam., bears S. 80° 30' E., 36 lks. dist. marked T 11 S R 10 E S 15 BT.

A spruce, 10 ins. diam., bears N. 54° W., 110 lks. dist., marked T 11 S R 10 E S 9 BT.

no other trees available, raise amount of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen, spruce, pine and balsam.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 43.60 chs.

September 28, 1912.

September 30: At 7h. 50m., a.m., l.m.t., I set off 39° 52' N., on the lat. arc, 2° 47' S., on the decl. arc, and determine a meridian, with the solar at the cor. of secs. 9-10-15 and 16.

Thence I run

SUBDIVISIONS OF T11 S., R.10 E.

CHAINS

S.89°56'E., on a random line

Bet. secs. 10 and 15.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.90 Intersect N. and S. line, 11 lks. N. of the cor. of secs. 10-11-14 and 15.

Thence I run

N.89°51'W., on a true line

Bet. secs. 10 and 15.

Descend over mountainous land, through scattering timber and dense undergrowth.

3.60 Hollow, 80 ft. deep, course SE.

Ascend.

26.50 Enter heavy timber, bears NE. and SW.

37.00 Ridge, 540 ft. high, bears NE. and SW.

Descend abruptly.

39.95 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 10

S 15

1912

from which

A pine, 5 ins. diam., bears N.59°30'E., 62 lks. dist., marked $\frac{1}{4}$ S 10 BT.

A pine, 8 ins. diam., bears S.4°30'E., 130 lks. dist., marked $\frac{1}{4}$ S 15 BT.

58.00 Leave heavy timber, bears NE. and SW. Enter scattering timber and dense undergrowth.

66.70 Stream of fresh water, 2 lks. wide, 2 ins. deep, in bottom of hollow, 950 ft. deep, course SE.

Ascend abruptly.

79.90 The cor. of secs. 10 and 15.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

CHAINS

Timber, pine, aspen and spruce.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 31.50 chs.

September 30: At this cor. I set off 2°52'S., on the decl. arc, and at 11h.50m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39°52'N.

N.0°02'W., bet. secs. 9 and 10.

Ascend over mountainous land, through scattering timber and dense undergrowth.

7.40 Spur, projects SE.

Descend. Enter heavy timber, bears NW. and SE.

23.00 Hollow, 120 ft. deep, course SE.

Ascend. Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 9 | S 10

1912

from which

A spruce, 24 ins. diam., bears S.39°E., 96 lks. dist., marked $\frac{1}{4}$ S 10 BT.

A spruce, 14 ins. diam., bears S.63°30'W., 179 lks. dist. marked $\frac{1}{4}$ S 9 BT.

41.67 Intersect the S. bdy. of the Uintah Indian Reservation.

Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the closing cor. for secs. 9 and 10, with brass cap, marked

U I N

$\frac{1}{4}$ S 9 | S 10

7 11 S X 10 X

1912

CHAINS

from which

A spruce, 13 ins. diam., bears S. 33° 30' E., 169 lks. dist.,
marked T 11 S R 10 E S 10 BT.

A spruce, 14 ins. diam., bears S. 34° W., 283 lks. dist.,
marked T 11 S R 10 E S 9 BT.

From this closing cor. the 71st mile cor. on the boundary
bears

N. 86° 45' E., 50.23 chs. to the mile post No. 71.

Land, mountainous.

Soil, clay and gravel, with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine, spruce and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and
grass.

Heavily timbered land on 15.60 chs.

September 30, 1912.

Claude L. Hest

U.S. Transitman.

September 27: At 7h. 51m., a.m., 1.m.t., I set off 39° 50' N.,
on the lat. arc, 1° 37' S., on the decl. arc, and determine a
meridian with the solar at the cor. of secs. 28-29-32 and
33.

Thence I run

S. 0° 03' E., on a random line

Bet. secs. 32 and 33.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

77.06 Intersect the offset for the Second Standard Parallel S.,
2 lks. W. of the stand. cor. of secs. 32 and 33.

Thence I run

N. 0° 04' W., on a true line

Bet. secs. 32 and 33.

Ascend over mountainous land, through dense undergrowth.

37.06 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the

CHAINS

ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 32 | S 33

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

45.00 Wash, 70 lks. wide, 8 ft. deep, course SE.

71.60 Ridge, 860 ft. high, bears NW. and SE.

Descend.

77.06 The cor. of secs. 28-29-32 and 33.

Land, mountainous.

Soil, clay loam and gravel, 24 ins. deep, 2nd rate.

Subsoil, gravel.

No timber.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Dense undergrowth on 77.06 chs.

September 27: At this cor. I set off $1^{\circ}42'S$ on the decl. arc, and at 11h. 51m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}50'N$.

$N.0^{\circ}03'W.$, bet. secs. 28 and 29.

Descend over mountainous land, through dense undergrowth.

10.00 Old road, bears NW. and SE.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 29 | S 28

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

40.20 Enter dense undergrowth of oak brush, service berry, and buck brush.

61.00 Enter heavy growth of aspen, bears E. and W.

63.60 Old road, bears NW. and SE.

68.00 Leave aspen, bears E. and W. Enter dense undergrowth.

71.00 Enter heavy growth of aspen, bears E. and W.

72.60 Leave aspen, bears E. and W.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

72.65 Stream of fresh water, 3 lks. wide, 2 ins. deep, in bottom of left hand fork of Willow Creek Canyon, 500 ft. deep, course E.

Ascend abruptly.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 20-21-28 and 29, with brass cap, marked

T 11 S R 10 E

S 20	S 21
S 29	S 28

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, choke cherry, buck brush, sage brush and grass.

Heavily timbered land on 8.60 chs.

September 27, 1912

September 28: At 7h. 51m., a.m., l.m.t., I set off 39°50'N. on the lat. arc, 2°00'S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 20-21-28 and 29.

Thence I run

East, on a random line

Bet. secs. 21 and 28.

40.00 Set temp. ¼ sec. cor.

79.86 Intersect N. and S. line, 2 lks. N. of the cor. of secs. 21-22-27 and 28.

September 28: At this cor. I set off 2°05'S., on the decl. arc, and at 11h. 51m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39°50'N.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

- Thence I run
 N. 63° 59' W., on a true line
 Bet. secs. 21 and 28.
 Ascend over mountainous land, through dense undergrowth.
 .80 Ridge, bears NW. and SE.
 Descend.
 14.30 Hollow, 300 ft. deep, course SE.
 Ascend.
 22.55 Spur, projects SE.
 Ascend.
 24.80 Enter scattering timber, bears N. and S.
 28.70 Hollow, 90 ft. deep, course SW.
 Ascend.
 30.00 Leave scattering timber, bears N. and S.
 34.10 Spur, projects SW.
 Descend.
 39.93 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 21

 S 28
 1912
 raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
 49.15 Stream of fresh water, 5 lks. wide, 2 ins. deep, in bottom of
 hollow, 250 ft. deep, course S.
 Ascend.
 53.70 Enter heavy growth of aspen, bears N. and S.
 54.70 Leave aspen, bears N. and S., Enter dense undergrowth.
 57.00 Spur, projects SE.
 Descend.
 76.40 Hollow, 75 ft. deep, course SE.
 Ascend.
 79.86 The cor. of secs. 20-21-28 and 29.
 Land, mountainous.
 Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd
 rate.

CHAINS

Subsoil, gravel and loose rock.

Undergrowth, oak, service berry, buck brush, sage brush, and grass.

Timber, cedar, pinon pine and aspen.

Heavily timbered land on 1.00 ch. Dense undergrowth on the rest.

September 28, 1912.

September 30: At 7h.50m., a.m., l.m.t., I set off $39^{\circ}50'N.$, on the lat. arc, $2^{\circ}47'S.$, on the decl. arc, and determine a meridian with the solar at the cor. of secs. 20-21-28 and 29.

Thence I run

$N.0^{\circ}03'W.$, bet. secs. 20 and 21.

Ascend over mountainous land, through dense undergrowth.

2.50 Spur, projects SE.

Descend.

8.10 Hollow, 50 ft. deep, course SE.

Ascend.

19.20 Perpendicular sand stone ledge, 12 ft. high, bears NW. and SE.

31.25 Ridge, bears NW. and SE.

Descend abruptly.

32.85 Enter heavy growth of aspen, bears NW. and E.

34.40 Leave aspen, bears NW. and SE. Enter dense undergrowth.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground, surrounded by a mound of earth and stone, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 20 | S 21

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 18 ins. in the ground.

September 30: At this cor. I set off $2^{\circ}52'S.$, on the decl. arc, and at 11 h.50m., a.m., l.m.t., observe the sun on the

CHAINS

- meridian, the resulting lat. is $39^{\circ}51'N$.
- 41.50 Enter heavy growth of aspen, bears NW. and SE.
- 46.60 Hollow, 300 ft. deep, course SE.
Ascend, abruptly.
- 47.90 Leave aspen, bears W. and SE. Enter dense undergrowth.
- 55.95 Spur, projects SE.
Descend abruptly.
- 60.70 Enter heavy growth of aspen, bears NW. and SE.
- 63.60 Hollow, 200 ft. deep, course NE.
Ascend.
- 64.50 Leave aspen, bears NE. and SW. Enter, dense undergrowth.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 20 ins. in the ground, surrounded by a mound of earth and stone, for the cor. of secs. 16-17-20 and 21, with brass cap, marked

T 11 S R 10 E

S 17	S 16
S 20	S 21

1912

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 20 ins. in the ground.

Land, mountainous,

Soil, clay and gravel, with loose rock, 18 ins. deep, 3rd rate

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 11.75 chs.

September 30, 1912.

October 1: At 7a.50m., a.m., l.m.t., I set off $39^{\circ}51'N$, on the lat. arc, $3^{\circ}10'S$, on the decl. arc, and determine a meridian with the solar at the cor. of secs. 16-17-20 and 21.

SUBDIVISIONS OF T¹¹ S., R. 10 E.

CHAINS

Thence I run
S. 89° 59' E., on a random line
Bet. secs. 16 and 21.

40.00 Set temp. $\frac{1}{4}$ sec. cor.
79.94 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 15-16-21 and 22.

Thence I run
N. 89° 57' W., on a true line
Bet. secs. 16 and 21.

Descend over mountainous land, through dense undergrowth.

5.00 Head of hollow, 100 ft. deep, course S.

Ascend.

11.00 Spur, projects SW.

Descend.

24.00 Hollow, 300 ft. deep, course SE.

Ascend abruptly.

33.00 Ridge, bears NW. and SE.

Descend.

39.97 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground, surrounded by a mound of earth and stone, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 16

S 21

1912

raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 16 ins. in the ground.

46.00 Hollow, 300 ft. deep, course SW.

Ascend.

53.00 Spur, projects SE.

Descend. abruptly.

67.90 Stream of fresh water, 8 lks. wide, 3 ins. deep, in bottom of hollow, 400 ft. deep, course SE.

Ascend abruptly.

CHAINS

- 79.94 The cor. of secs. 16-17-20 and 21.
 Land, mountainous.
 Soil, clay and gravel with loose rock, 18 ins. deep, 3rd rat
 Subsoil, gravel and loose rock.
 No timber.
 Undergrowth, oak, service berry, buck brush and sage brush,
 grass.
 Dense undergrowth on 79.94 chs.
 October 1: At this cor. I set off 3°15'S., on the decl. arc
 and at 11h.50m., a.m., 1.m.t., observe the sun on the merid
 the resulting lat. is 39°51'N.
-
- N.0°03'W., bet. secs. 16 and 17.
 Ascend over mountainous land, through dense undergrowth.
- 2.20 Spur, projects SE.
 Descend.
- 10.10 Enter scattering timber, bears NW. and SE.
- 22.65 Stream of fresh water; 3 lks. wide, 2 ins. deep, in bottom of
 hollow, 250 ft. deep, course SE.
 Ascend.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
 ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
- $$\begin{array}{c} \frac{1}{4} S 17 \quad | \quad S 16 \\ 1912 \end{array}$$
- from which
- A red pine, 8 ins. diam., bears N.9°E., 215 lks. dist.
 marked $\frac{1}{4}$ S 16 BT.
- A red pine, 8 ins. diam., bears S.38°W., 94 lks. dist.
 marked $\frac{1}{4}$ S 17 BT.
- 50.00 Ridge, bears E. and SW.
 Descend.
- 53.35 Enter heavy timber, bears E. and W.
- 67.25 Hollow, 100 ft. deep, course SW.
 Ascend. Leave heavy timber, bears SW. and NE. Enter scattering

CHAINS

timber and dense undergrowth.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 8-9-16 and 17, with brass cap, marked

T 11 S R 10 E

S 8 | S 9

S 17 | S 16

1912

from which

A red pine, 8 ins. diam., bears N. 46° E., 152 lks. dist., marked T 11 S R 10 E S 9 BT.

A red pine, 5 ins. diam., bears S. 41° E., 50 lks. dist., marked T 11 S R 10 E S 16 BT.

A red pine, 4 ins. diam., bears S. 18° W., 83 lks. dist., marked T 11 S R 10 E S 17 BT.

A red pine, 5 ins. diam., bears N. 5° W., 72 lks. dist., marked T 11 S R 10 E S 8 BT.

Land, mountainous.

Soil, clay loam, with gravel and loose rock, 18 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, oak, service berry, buck brush, choke cherry, sage brush and grass.

Heavily timbered land on 13.90 chs.

October 1, 1912.

October 2: At 7h. 49m. a.m., l.m.t., I set off 39° 52' N., on the lat. arc, 3° 33' S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 8-9-16 and 17.

Thence I run

S. 89° 57' E., on a random line

Bet. secs. 9 and 16.

CHAINS

- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.98 Intersect N. and S. line, 2 lks. N. of the cor. of secs. 9-10-15 and 16.
- Thence I run
N. $89^{\circ}56'W.$, on a true line
Bet. secs. 9 and 16.
- Ascend over mountainous land, through scattering timber and dense undergrowth.
- 4.00 Enter heavy timber, bears N. and S.
- 6.10 Leave heavy timber, bears N. and S. Enter scattering timber and dense undergrowth.
- 8.80 Spur, projects S.
Descend. abruptly.
- 17.20 Hollow, 330 ft. deep, course SE.
Ascend abruptly. Enter heavy timber, bears NW. and SE.
- 31.60 Ridge, bears N. and SE.
Descend.
- 32.20 Hollow, 30 ft. deep, course S.
Ascend.
- 39.99 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the ground, surrounded by a mound of earth and stone, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 9
-
- S 16
- 1912
- from which
- A red pine, 10 ins. diam., bears N. $21^{\circ}E.$, 61 lks. dist marked $\frac{1}{4}$ S 9 BT.
- A red pine, 12 ins. diam., bears S. $43^{\circ}W.$, 81 lks. dist marked $\frac{1}{4}$ S 16 BT.
- Note: On account of natural obstacles it is impossible to set this cor. over 14 ins. in the ground.
- 49.20 Leave heavy timber, bears N. and S. Enter scattering timber and dense undergrowth.
- 55.45 Ridge, bears NW. and SE.

CHAINS

Descend abruptly.

60.25 Enter heavy timber, bears N. and S.

71.75 Hollow, 300 ft. deep, course SW.

Ascend abruptly. Leave heavy timber, bears N. and S., Enter scattering timber and dense undergrowth.

78.00 Spur, projects S.

Descend.

79.98 The cor. of secs. 8-9-16 and 17.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 18 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen and pine.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 45.60 chs.

October 2: At this cor. I set off 3°38'S., on the decl. arc, and at 11h.49m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is 39°52'N.

N.0°03'W., bet. secs. 8 and 9.

Ascend over mountainous land, through scattering timber and dense undergrowth.

12.00 Enter heavy timber, bears E. and W.

18.06 Intersect the S. bdy. of the Uintah Indian Reservation.

Set an iron post, 3 ft. long, 2 ins. in diam., 14 ins. in the ground, surrounded by a mound of earth and stone, for the closing cor. of secs. 8 and 9, with brass cap, marked

U I R ✓

S 8 | S 9

T 11 S R 10 E

1912

from which

A red pine, 8 ins. diam., bears S. 31°30'E., 67 lks. dist.,

CHAINS

marked T 11 S R 10 E S 9. BT.

A spruce, 5 ins. diam., bears S. 74° W., 75 lks. dist.,

marked T 11 S R 10 E S. 8. BT.

Note: On account of natural obstacles it is impossible to set this cor. over 14 ins. in the ground.

From this cor. the 73rd mile cor. on the boundary bears as follows:

N. 67° 45' W., 16.05 chs. to the 73rd mile post.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 18 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen and pine.

Undergrowth, oak, service berry, buck brush, choke cherry, sage brush and grass.

Heavily timbered land on 6.06 chs.

October 2, 1912

John P. Hewar
U.S. Surveyor.

October 1: At 7h. 50m., a.m., l.m.t., I set off 39° 50' N., on the lat. arc, 3° 10' S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 29-30-31 and Thence I run

S. 0° 03' E., on a random line

Bet. secs. 31 and 32.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

76.25 Intersect the offset for the 2nd Standard Parallel S., 1 lks. E. of the standard cor. of secs. 31 and 32.

Thence I run

N. 0° 03' E., on a true line

Bet. secs. 31 and 32.

Ascend over mountainous land, through dense undergrowth.

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

36.25 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground, surrounded by a mound of earth and stone, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 31 | S 32

1912

raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 16 ins. in the ground.

40.00 Ascend abruptly.

56.80 Ridge, 900 ft. above sec. cor., bears NW. and SE.

Descend gradually.

67.80 Enter heavy growth of aspen, bears NW. and SE.

72.20 Leave timber, bears E. and W. Enter dense undergrowth.

76.25 The cor. of secs. 29-30-31 and 32.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 4.40 chs.

October 1: At this cor. I set off 3°15'S., on the decl. arc, and at 11h.50m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39°50'N.

N. 0°03'W., bet. secs. 29 and 30.

Descend over mountainous land, through dense undergrowth.

1.90 Hollow, 50 ft. deep, course SE.

Ascend.

33.00 Ridge, 600 ft. high, bears NW. and SE.

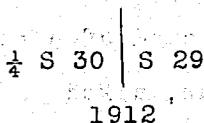
Descend abruptly.

36.50 Enter heavy growth of aspen, bears NW. and SE.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the

CHAINS

ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked



from which

An aspen, 5 ins. diam., bears S. 45° E., 15 lks. dist.,
marked $\frac{1}{4}$ S 29 BT.

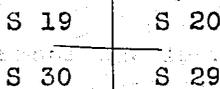
An aspen, 5 ins. diam., bears S. 60° W., 18 lks. dist.,
marked $\frac{1}{4}$ S 30 BT.

67.10 Hollow, 300 ft. deep, course NE.

Ascend.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the
ground, for the cor. of secs. 19-20-29 and 30, with brass
cap, marked

T 11 S R 10 E



1912

from which

An aspen, 5 ins. diam., bears N. 35° E., 20 lks. dist.,
marked T 11 S R 10 E S 20 BT.

An aspen, 5 ins. diam., bears S. 17° 30' E., 19 lks. dist.,
marked T 11 S R 10 E S 29 BT.

An aspen, 6 ins. diam., bears S. 44° W., 23 lks. dist.,
marked T 11 S R 10 E S 30 BT.

An aspen, 6 ins. diam., bears N. 46° W., 27 lks. dist.,
marked T 11 S R 10 E S 19 BT.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 20 ins. deep, 3rd
rate.

Subsoil, gravel and loose rock.

Timber, aspen.

Undergrowth, oak, service berry, buck brush, choke cherry,
sage brush and grass.

Heavily timbered land on 43.50 chs.

CHAINS

October 2: At 7h.49m., a.m., l.m.t., I set off $39^{\circ}50'N.$, on the lat.arc, $3^{\circ}33'S.$, on the decl.arc, and determine a meridian with the solar at the cor.of secs.19-20-29 and 30. Knowing from the closing of the line bet.secs.30 and 31, on the W.bdy.of the Tp.that the line bet.secs.19 and 30 will not close within the prescribed limits,

Therefore I run
West, on a true line
Bet.secs.19 and 30.

Ascend abruptly over mountainous land, through heavy timber.

40.00

Set an iron post, 3 ft.long, 1 in.in diam., 26 ins.in the ground, for the $\frac{1}{4}$ sec.cor., with brass cap, marked

$\frac{1}{4}$ S 19

S 30

1912

from which

A red-pine, 12 ins.diam., bears $N.16^{\circ}E.$, 7 lks.dist., marked $\frac{1}{4}$ S 19 BT.

A red-pine, 12 ins.diam., bears $S.51^{\circ}E.$, 48 lks.dist., marked $\frac{1}{4}$ S 30 BT.

October 2: At this cor.I set off $3^{\circ}38'S.$, on the decl.arc, and at 11h.49m., a.m., l.m.t., observe the sun on the meridian, the resulting lat.is $39^{\circ}50'N.$

44.00

Leave heavy timber, bears NW.and SE, Enter scattering timber and dense undergrowth.

58.90

Ridge, 650 ft.high, bears NW.and SE.
Descend abruptly.

80.27

Intersect the W.bdy.of the Tp.250 lks.S.of the cor.of secs.19-24-25 and 30, heretofore described.

Set an iron post, 3 ft.long, 2 ins.in diam., 16 ins.in the ground, surrounded by a mound of earth and stone, for the closing cor.of secs.19 and 30, with brass cap, marked

CHAINS

T 11 S ✓

S 24

S 19

S 25 CO

S 30

R 9 E

R 10 E

1912

raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor.

Note: On account of natural obstacles it is impossible to set this cor. over 16 ins. in the ground.

I destroy all marks on the cor. of secs. 19-24-25 and 30, pertaining to R.10 E.

Land, mountainous.

Soil, clay and gravel, with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered, land on 36.87 chs.

October 2, 1912.

Claude L. East

U.S. Transitman.

October 3: At 7h. 49m., a.m., l.m.t., I set off 39°50'N., on the lat. arc, 3°57'S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 19-20-29 and 30.

Thence I run

East, on a random line

Bet. secs. 20 and 29.

40.00 Set temp. ¼ sec. cor.

79.98 Intersect N. and S. line, 5 lks. S. of the cor. of secs. 20-21-28 and 29.

October 3: At this cor. I set off 4°01'S., on the decl. arc,

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

and at 11h.49m., a.m., 1.m.t., observe the sun on the meridian
the resulting lat. is 39°50'N.

Thence I run
S.89°58'W., on a true line
Bet. secs. 20 and 29.

Ascend over mountainous land, through dense undergrowth.

10.30 Spur, projects S.
Descend.

17.20 Hollow, 75 ft. deep, course S.
Ascend,

21.20 Spur, projects SW.
Descend.

38.20 Hollow, 150 ft. deep, course S.
Ascend.

39.99 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the
ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 20

S 29
1912

raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

41.50 Old road, bears NW. and SE.

42.00 Spur, projects SE.
Descend.

44.20 Stream of fresh water, 3 lks. wide, 4 ins. deep, in bottom of
the left hand fork of Willow Creek, canyon, 300 ft. deep,
course SE.

Ascend.

45.00 Enter heavy timber, bears NW. and SE.

54.00 Old road, bears NW. and SE.

79.98 The cor. of secs. 19-20-29 and 30,

Land, mountainous.

Soil, clay and gravel with loose rock, 20 ins. deep, 3rd
rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

CHAINS

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 34.98 chs.

October 3, 1912.

John P. Stewart
U.S. Surveyor.

October 3: At 7h.49m., a.m., l.m.t., set off, 39°50'N., on the lat. arc, 3°57'S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 19-20-29 and 30.

Thence I run N. 0°03' W., bet. secs. 19 and 20. Descend over mountainous land, through heavy timber.

17.30 Old road, bears NW. and SE.

31.00 Stream of fresh water, 4 lks. wide, 2 ins. deep, in bottom of the left hand fork of Willow Creek Canyon, 500 ft. deep, course E.

Ascend abruptly.

32.10 Old road, bears E. and W.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the 1/4 sec. cor., with brass cap, marked

1/4 S 19 | S 20

1912

from which

An aspen, 8 ins. diam., bears S. 86° E., 17 lks. dist., marked 1/4 S 20 BT.

An aspen, 6 ins. diam., bears S. 69° W., 16 lks. dist., marked 1/4 S 19 BT.

43.00 Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.

45.85 Perpendicular ledge, 20 ft. high, bears NW. and SE., on ridge, bears NE. and SW.

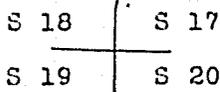
SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

Descend.

- 55.20 Bend in creek, 2 lks. wide, 2 ins. deep, course from NW. to SW. in bottom of hollow, 300 ft. deep, course SW.
- Continue N. along W. side of hollow.
- 69.00 Same creek, course SW.
- 79.00 Same creek, course SE.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 17-18-19 and 20, with brass cap, marked

T 11 S R 10 E



1912

from which

- A red pine, 18 ins. diam., bears N. 61° E., 64 lks. dist., marked T 11 S R 10 E S 17 BT.
- An aspen, 8 ins. diam., bears S. 52° E., 104 lks. dist., marked T 11 S R 10 E S 20 BT.
- An aspen, 16 ins. diam., bears S. 28° W., 79 lks. dist., marked T 11 S R 10 E S 19 BT.
- An aspen, 7 ins. diam., bears N. 4° W., 124 lks. dist., marked T 11 S R 10 E S 18 BT.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and clay.

Timber, aspen and pine.

Undergrowth, oak, service berry, buck brush sage brush and grass.

Heavily timbered land on 74.25 chs.

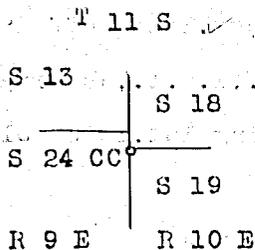
October 3: At this cor. I set off 4° 01' S., on the decl. arc, and at 11h. 49m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is 39° 51' N.

CHAINS

- For reasons explained on page 59 of these notes, I run West, on a true line
- Bet. secs. 18 and 19.
- Descend over mountainous land, through scattering timber and dense undergrowth.
- .20 Stream of fresh water, 3 lks. wide, 2 ins. deep, in bottom of hollow, 300 ft. deep, course SE.
- Ascend abruptly.
- 22.70 Spur, projects SE.
- Descend.
- 32.90 Hollow, 175 ft. deep, course SE.
- Ascend.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 18
-
- S 19
- 1912
- from which
- A red pine, 10 ins. diam., bears N. 88° E., 166 lks. dist. marked $\frac{1}{4}$ S 18 BT.
- A red pine, 5 ins. diam., bears S. 48° E., 170 lks. dist., marked $\frac{1}{4}$ S 19 BT.
- 43.65 Spur, projects S.
- Descend.
- 47.70 Enter heavy timber, bears N. and S.
- 56.10 Hollow, 100 ft. deep, course SW.
- Ascend.
- 68.30 Leave heavy timber, bears N. and S. Enter scattering timber and dense undergrowth.
- 69.00 Spur, projects S.
- Descend. abruptly.
- 80.00 Enter heavy timber, bears N. and S.
- 80.82 Intersect the W. bdy. of the Tp. 24E 1ks. S. of the cor. of secs. 13-18-19 and 24, heretofore described.
- Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the

CHAINS

ground, for the closing cor. of secs. 18 and 19, with brass cap, marked



1912

from which

An aspen, 4 ins. diam., bears N. 47° E., 34 lks. dist., marked T 11 S R 10 E S 18 BT.

A red pine, 15 ins. diam., bears S. 32° 30' E., 107 lks. dist., marked T 11 S R 10 E S 19 BT.

I destroy all markings on the cor. of secs. 13-18-19 and 24, pertaining to R. 10, E.

Land, mountainous.

Soil, clay and gravel with loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 21.42 chs.

October 3, 1912.

Claude L. Hart

U.S. Transitman.

October 4: At 7h. 49m., a.m., l.m.t., I set off 39° 51' N., on the lat. arc, 4° 20' S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 17-18-19 and 20.

Thence I run N. 89° 58' E., on a random line bet. secs. 17 and 20.

40.00

Set temp. 1/4 sec. cor.

CHAINS

- 79.96 Intersect N. and S. line, 7 lks. S. of the cor. of secs. 16-17-20 and 21.
 October 4: At this cor. I set off $4^{\circ}25'S.$, on the decl. arc, and at 11h. 49m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}51'N.$
 Thence I run
 $S.89^{\circ}55'W.$, on a true line
 Bet. secs. 17 and 20.
 Ascend over mountainous land, through dense undergrowth.
- 4.30 Enter heavy growth of aspen, bears N. and S.
- 5.50 Leave aspen, bears N. and S. Enter dense undergrowth.
- 7.00 Enter heavy timber, bears N. and S.
- 36.00 Leave heavy timber, bears N. and S. Enter scattering timber and dense undergrowth.
- 39.98 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4} S 17$

 $S 20$
 1912
 from which
 A spruce, 16 ins. diam., bears $S.54^{\circ}30'W.$, 61 lks. dist. marked $\frac{1}{4} S 20 BT.$
 A pine, 4 ins. diam., bears $N.47^{\circ}W.$, 132 lks. dist., marked $\frac{1}{4} S 17 BT.$
- 42.00 Ridge, 500 ft. above sec. cor., bears N. and S.
 Descend abruptly.
- 44.50 Enter burnt and fallen timber.
- 60.00 Hollow, 500 ft. deep; course SW.
 Ascend abruptly.
- 71.50 Spur; projects SW.
 Descend. Leave burnt and fallen timber.
- 79.96 The cor. of secs. 17-18-19 and 20.
 Land, mountainous.
 Soil, clay and gravel with loose rock, 24 ins. deep, 3rd rate

CHAINS

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Heavily timbered land on 30.20 chs.

October 4, 1912.

John R. Stewart
U.S. Surveyor.

October 4: At 7h.49m., a.m., l.m.t., I set off $39^{\circ}51'N.$, on the lat. arc, $4^{\circ}20'S.$, on the decl. arc, and determine a meridian, with the solar at the cor. of secs. 17-18-19 and 20.

Thence I run

$N.0^{\circ}03'W.$, bet. secs. 17 and 18.

Ascend gradually along the west side of hollow, through dense undergrowth and scattering timber.

8.30 Wash, 15 lks. wide, 4 ft. deep, course W.

24.30 Wash, 10 lks. wide, 2 ft. deep, course SW.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked

$\frac{1}{4}$ S 18. | S 17

1912

from which

A red pine, 8 ins. diam., bears $S.10^{\circ}E.$, 69 lks. dist., marked $\frac{1}{4}$ S 17 BT.

A red pine, 10 ins. diam., bears $N.17^{\circ}30'W.$, 166 lks. dist., marked $\frac{1}{4}$ S 18 BT.

October 4: At this cor. I set off $4^{\circ}25'S.$, on the decl. arc, and at 11h.49m., a.m., l.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}51'N.$

CHAINS

- 44.60 Creek, 1 lk. wide, 2 ins. deep, course SW.
Ascend from hollow.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 7-8-17 and 18, with brass cap, marked

T 11 S R 10 E.

S 7	S 8
S 18	S 17

1912

from which

A white pine, 5 ins. diam., bears N.86°30'E., 9 lks. dist., marked T 11 S R 10 E S 8 BT.

A white pine, 6 ins. diam., bears S.49°E., 139 lks. dist., marked T 11 S R 10 E S 17 BT.

A red pine, 10 ins. diam., bears S.73°W., 14 lks. dist., marked T 11 S R 10 E S 18 BT.

A white pine, 6 ins. diam., bears N.57°W., 42 lks. dist., marked T 11 S R 10 E S 7 BT.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, pine and aspen.

Undergrowth, oak, service berry, buck brush, sage brush and grass.

Dense undergrowth on 80.00 chs.

October 4, 1912.

October 5, 1912, Snow storm prevents field work.

October 7: At 7h.48m., a.m., l.m.t., I set off 39°52'N., on the lat. arc, 5°29'S., on the decl. arc, and determine a meridian with the solar at the cor. of secs. 7-8-17 and 18.

Thence I run

N.89°55'E., on a random line

SUBDIVISIONS OF T.11 S., R.10 E.

CHAINS

- Bet. secs. 8 and 17.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.94 Intersect the N. and S. line, 2 lks. N. of the cor. of secs. 8-9-16 and 17.
- Thence I run
- S. $89^{\circ}56'$ W., on a true line
- Bet. secs. 8 and 17.
- Descend over mountainous land, through scattering timber and dense undergrowth.
- 7.80 Enter heavy timber, bears N. and S.
- 9.60 Hollow, 210 ft. deep, course S.
- Ascend.
- 22.75 Spur, projects SE.
- Descend.
- 23.00 Leave heavy timber, bears NW. and SE. Enter scattering timber and dense undergrowth.
- 29.10 Enter heavy timber.
- 38.00 Hollow, 220 ft. deep, course SE.
- Ascend.
- 39.97 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 8
-
- S 17
- 1912
- from which
- A red pine, 8 ins. diam., bears N. 55° W., 70 lks. dist., marked $\frac{1}{4}$ S 8 BT.
- A red pine, 6 ins. diam., bears S. 20° W., 54 lks. dist., marked $\frac{1}{4}$ S 17 BT.
- October 7: At this cor. I set off $5^{\circ}34'$ S., on the decl. arc, and at 11h. 48m., a.m., 1.m.t., observe the sun on the meridian, the resulting lat. is $39^{\circ}52'$ N.
- 45.90 Spur, projects SE.
- Descend.
- 47.00 Leave timber, bears NW. and SE. Enter dense undergrowth.

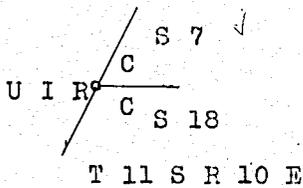
CHAINS

57.40 Enter scattering timber bears N.and S.
 61.70 Hollow,150 ft.deep,course SE.
 Ascend.
 79.94 The cor.of secs.7-8-17 and 18.
 Land,mountainous.
 Soil,clay loam with gravel and loose rock,24 ins.deep,3rd
 rate.
 Subsoil,gravel and loose rock.
 Timber,pine and aspen.
 Undergrowth,oak,service berry,buck brush,sage brush and
 grass.
 Heavily timbered land on 33.10 chs.

For reasons explained on page 59 of this survey,I run
 West,on a true line
 Bet.secs.7 and 18.

Ascend over mountainous land,through heavy timber.

3.77 Intersect the S bdy.of the Uintah Indian Reservation.
 Set an iron post,3 ft.long, 2 ins.in diam.,24 ins.in the
 ground,for the closing cor.of secs.7 and 18,with brass
 cap,marked



1912

from which

A red pine,12 ins.diam.,bears N.83°E.,133 lks.dist.
 marked T 11 S R 10 E S 7 BT.

A red pine,18 ins.diam.,bears S.10°W.,77 lks.dist.,
 marked T 11 S R 10 E S 18 BT.

From this closing cor.the 74th mile cor.on the boundary,
 bears as follows:

S.69°00'W.,6.19 chs.to the 74 th mile post.

Land,mountainous.

CHAINS

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and clay.

Timber, spruce, pine and aspen.

Scattering undergrowth of sage brush and grass.

Heavily timbered land on 3.77 chs.

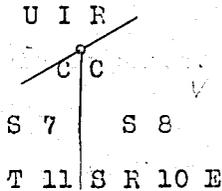
N.0°03'W., bet. secs. 7 and 8.

Ascend over mountainous land, through heavy timber.

1.43

Intersect the S. bdy. of the Uintah Indian Reservation.

Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the closing cor. of secs. 7 and 8, with brass cap, marked



from which

A white pine, 6 ins. diam., bears S.69°E., 13 lks. dist., marked T 11 S R 10 E S 8 BT.

A red pine, 12 ins. diam., bears S.18°W., 82 lks. dist., marked T 11 S R 10 E S 7 BT.

From this closing cor. the 74th mile cor. on the boundary bears:

S.69°00'W., 10.23 chs. to the 74th mile cor.

Land, mountainous.

Soil, clay loam with gravel and loose rock, 24 ins. deep, 3rd rate.

Subsoil, gravel and loose rock.

Timber, spruce, pine and aspen.

Undergrowth, sage brush and grass.

Heavily timbered land on 1.43 chs.

October 7, 1912.

Claude L. Hest
 U.S. Transitman

GENERAL DESCRIPTION OF T.11 S., R.10 E.

This fractional Tp. lies along the S. boundary of the Uintah Indian Reservation, and is rough and mountainous in character, and unfit for agricultural purposes.

The whole of this fractional Tp. is however suitable for grazing purposes, as there is an abundant growth of rich and nutritious grasses, and is used by sheepmen for a summer range.

The soil is of a clay loam in character, mixed with gravel and loose rock.

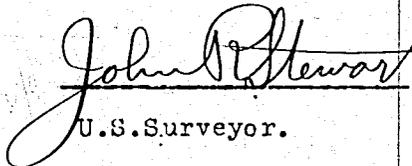
This frac. Tp. is in most part covered with a heavy growth of spruce, pine and aspen which is however of little commercial value as most of the more valuable timber has been cut.

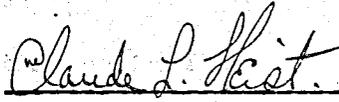
No indications of coal, oil or mineral were found in this frac. Tp.

The Tp. is well watered by streams running down the canyons.

The county road, from Colton to Theodore, in Willow Creek Canyon, runs diagonally through this Tp.

There are no settlers nor any improvements in any portion of this fractional Tp.


U.S. Surveyor.


U.S. Transitman.

For table of Latitudes and Departures see Boundaries of T.11 S., R.10 E.

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

For final oaths of U.S. Surveyor and Transitman see book "P" T.14 S. R.2 W.

_____ of the _____ Meridian, in the State of _____, which are represented the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me } this _____ day of _____, 191____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL, Salt Lake City, Utah, Oct. 30, 1915

The foregoing field notes of the survey of the Subdivisional lines of Township No. 11 South, Range No. 10 East of the Salt Lake Base and Meridian, Utah,

executed by John P. Stewart and Claude L. Heist under my special instructions dated May 23, 1911, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

[Signature]
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

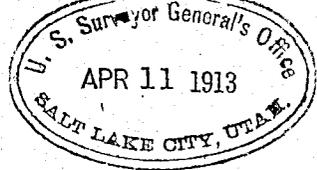
U. S. Surveyor General.

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BOOK A-409

FIELD NOTES

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OF THE ~~SURVEYOR GENERAL~~

RETRACEMENT AND RESURVEY

OF THE

EAST AND SOUTH BOUNDARIES

OF

TOWNSHIP 12 SOUTH, RANGE 9 EAST

Of the SALT LAKE BASE AND Meridian,

In the State of U T A H

EXECUTED BY

JOHN R. STEWART

In the capacity of U. S. Surveyor, under instructions dated May 23, 1911,

issued by the United States Surveyor General to govern surveys included in

Group No. 13, which were approved by the Commissioner of the General Land

Office, July 3, 1911, pursuant to authority contained in the Act of

Congress dated, 1911

Survey commenced October 6, 1912

Survey completed November 5, 1912

FIELD NOTES

BOOK A-409

INDEX DIAGRAM.

Township _____, Range _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Retracement East Bdy. T. 12 S., R. 9 E.

Chains

Survey commenced October 6, 1912 and executed with a K. and E. transit No. 20578 with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc, which is also the least count of the latitude and declination arcs.

The instrument was examined, tested on the meridian at Salt Lake City, found correct, and was approved by the surveyor general.

I examine the adjustments of the instrument and correct the level and collimation errors; then, to test the solar apparatus by comparing its indications resulting from solar observations made during p.m. and a.m. hours with a meridian established by Polaris observations, I proceed as follows:

On N. Bdy. of Tp.
At the closing cor. of Tp. 12 S., Rs. 9 and 10 E. which is an iron post 3 ins. in dia., extending 12 ins. above ground, firmly set and mkd. and witnessed as described by the surveyor general, latitude $39^{\circ}48'40''$ N., longitude $110^{\circ}52'57''$ west I set off $39^{\circ}49'$ N. on the lat. arc; $5^{\circ}14'$ S. on the decl. arc; and at 3h 48m p.m., l.m.t., I determine a meridian with the solar at the cor. described above, and mark a point thereof on a stone firmly set in the ground 5 chs. N. of the cor. Said cor. is 11.09 chs. E. of the closing cor. of T. 11 S., R. 10 E. and was set by Collier and Swan.

At 6h 32.5m p.m., l.m.t., I observe Polaris at eastern elongation in accordance with the Manual and mark a point in the line thus determined by a tack driven in a wooden plug set in the ground 5.00 chs. N. of the cor.

October 6, 1912.

October 7, 1912: At 7h 30m a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}31'$ to the west and mark a point in the meridian thus determined by cutting a small groove in the stone already set 5.00 chs. N. of the cor.

Retracement East Bdy. T. 12 S., R. 9 E.

Chains

this mark falls 0.39 ins. east of the meridian established by the solar.

At 7h 48m a.m., l.m.t., I set off 39°49'N. on the lat. arc; 5°29'S. on the decl. arc; and mark the meridian determined by the solar by a cross on the stone already set 5.00 chs. N. of the cor.; this mark falls 0.42 ins.

east of the meridian established by Polaris observation

The solar apparatus by p.m. and a.m. observations defines positions respectively for meridians about 0'21" west and 0'22" east of the meridian established by Polaris observation. Therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the meridian at 8h 30m a.m., is N.16°49'W., the angle thus determined gives the mag. decl. 16°49'E.

Thence I run South, on retracement line along E. bdy. of Tp. bet. secs. 1 and 6.

Over rolling mountainous land; through dense undergrowth.

Desc.

3.35 Road, bears NE. and SW.

Asc.

29.70 Top of ridge, 50 ft. above road, bears N.80°W. and S.80°E.

Desc.

39.99 Fall 70 lks. East of the cor. of secs. 1,6,7 and 12, which

is a sandstone 14x9x7 ins. above ground, firmly set and mkd. and witnessed as described by the surveyor general

The course of this mile is therefore S.1°00'W. 40.00 chs. Land, rolling.

Soil, sandy loam; 2 ft. deep; 2nd rate.

No timber. Undergrowth, sagebrush.

Good grass for grazing.

Mountainous land or land covered with dense undergrowth,

40.00 chs.

Retracement E. bdy. T. 12 S., R. 9 E. - Continued.

October 7, 1912. At this cor. I set off $5^{\circ}34'S.$, on the decl. arc, and at 11 h 48 m a.m., J.M.T., I observe the sun on the meridian, the resulting lat. is $39^{\circ}48'N.$, which is the proper lat. nearly.

South, on a retracement line bet. secs. 7 and 12.

Over rolling mountainous land; through dense undergrowth.

Asc.

8.40 Old abandoned Railroad track, bears $N.80^{\circ}W.$ and $S.80^{\circ}E.$

13.25 County road, from Colton to Theodore and Price, bears $N.80^{\circ}W.$ and $S.80^{\circ}E.$

36.00 Top of ridge, 70 ft. high, bears $N.60^{\circ}E.$ and SW.

Desc. gradually.

41.37 Fall 72 lks. E. of the $\frac{1}{2}$ sec. cor. bet. secs. 7 and 12, which is an iron post, 1 in. in dia., extending 12 ins. above ground, firmly set, and witnessed by a mound of stone, on the west.

55.60 Sulphur Creek, 2 lks. wide, 1 in. deep, in head of Sulphur canon, 30 ft. below ridge, course SW.

Asc.

78.90 Creek, 1 lk. wide, 1 in. deep, course $N.20^{\circ}E.$

79.76 Fall 109 lks. East of the cor. of secs. 7, 12, 13, and 18, which is a sandstone, $12 \times 10 \times 8$ ins., above ground, firmly set, and mtd. and witnessed as described by the surveyor general.

The course of the north half is therefore $S.1^{\circ}00'W.$ 41.38 chs.; and the south half is $S.0^{\circ}32'W.$, 58.38 chs.

Land, rolling mountainous.

Soil, sandy loam; 1st rate about 2 ft. deep. subsoil, gravel.

No timber.

Undergrowth, sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

79.76 chs.

October 7, 1912.

Retracement E. bdy. T. 12 S., R. 9 E. - Continued.

Chains

October 8, 1912: At 7 h 48 m a.m., l.m.t., I set off 39' 47" on the lat. arc; 5° 52' S., on the decl. arc; and determine meridian with the solar, at the cor. of secs. 7, 12, 13, and 18. Thence I run South, on a retracement line bet. secs. 13 and 18. Over rolling mountainous land; through dense undergrowth. Asc.

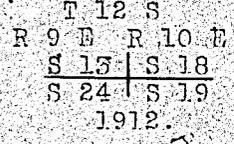
- 1.60 Creek, 1 lk. wide, 2 in. deep, course N. 10° E.
- 3.50 Creek, 1 lk. wide, 1 in. deep, course N. 10° W.
- 5.15 Creek, 1 lk. wide, 1 in. deep, course N. 15° E.
- 43.40 Fall 43 lks. East of the 1/2 sec. cor., bet. secs. 13 and 18, which is a limestone, 10x5x5 ins., above ground, firmly set, and mkd. and witnessed as described by the surveyor general.
- 51.60 Enter heavy aspen timber, bears N. 50° E. and S. 30° W.
- 62.00 Leave timber, bears E. and W.
- 66.40 Head of swale, course N. 70° W.

Continued asc.

- 83.40 Fall 82 lks. East of the cor. of secs. 13, 18, 19, and 24, which is a limestone, 14x9x8 ins., above ground, loosely set, and partly decayed.

I destroy the old cor. and re-establish it in the same place as follows:

Set an iron post, 5 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 13, 18, 19, and 24, with brass cap mkd.



Dig pits, 18x18x12 ins. in each sec. 5 1/2 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

The course of this mile is therefore S. 0° 34' W., 83.40 chains. Land, rolling mountainous.

- Soil, loam mixed with gravel. 2nd rate.
- Timber, aspen.
- Undergrowth, sage, oak, buck, and rabbit brush.
- Good grass for grazing.

Retracement T. 12 S., R. 9 E. - Continued.

mountainous land, or land covered with dense undergrowth.
83.40 chs.

October 8, 1912: At this cor. I set off $5^{\circ}57'S.$, on the decl. arc, and at 11 h 48 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}46'N.$, which is the proper lat. nearly.

South, on a retracement line bet. secs. 19 and 24.

40.00 No trace of the old cor.

Set temp. cor.

80.00 Find no trace of the old . Set temp. cor. of secs. 19, 24, 25, and 30.

October 8, 1912.

October 10, 1912: At 7 47 m a.m., l.m.t., I set off $39^{\circ}46'N.$, on the lat. arc; $6^{\circ}38'S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 19, 24, 25, and 30.

Thence I run

South, on a retracement line bet. secs. 25 and 30.

40.00 Find no trace of $\frac{1}{2}$ sec. cor. Set temp. $\frac{1}{4}$ sec. cor.

80.00 Find no trace of cor. of secs. 25, 30, 31, and 36.

Set temp. cor.

October 10, 1912.

October 11, 1912: At 7 h 47 m a.m., l.m.t., I set off $39^{\circ}44'N.$, on the lat. arc; $7^{\circ}00'S.$, on the decl. arc; and determine a meridian with the solar, at the temp. cor. of secs. 25, 30, 31, and 36.

Thence I run

Retracement T. 12 S., R. 9 E. - Continued.

- Chains
 . South, on a retracement line bet. secs. 31 and 36.
 40.00 Find no trace of the $\frac{1}{2}$ sec. cor. Set temp. $\frac{1}{2}$ sec. cor.
 83.36 Fell 8.71 chs. West of the cor. of Tps. 12 and 13 S., Rs. 9 and 10 E., which is a sandstone, 20x14x10 ins., above ground, firmly set, and mkd. and witnessed as described by the surveyor general.
- I mark bearing trees as follows:
- A cedar, 12 ins. dia., bears N. 41° 50' E., 437 lks. dist. dist. mkd. T 12 S R 10 E S 31 B T.
 - A cedar, 5 ins. dia., bears S. 10° E., 86 lks. dist. mkd. T 13 S R 10 E S 6 B T.
 - A pinon pine, 11 ins. dia., bears S. 45° 30' W., 200 lks. dist. mkd. T 13 S R 9 E S 1 B T.
 - A pinon pine, 6 ins. dia., bears N. 46° 50' W., 35 lks. dist. mkd. T 12 S R 9 E S 36 B T.

This falling answering to a correction of 2° 03' to the west and each mile will be 81.18 chs.

October 11, 1912.

October 12, 1912: At 7 h 47 m a.m., l.m.t., I set off 39° 43' W. on the lat. arc; 7° 25' S., on the decl. arc; and determine a meridian with the solar, at the cor. of Tps. 12 and 13 S., Rs. 9 and 10 E.

Thence I ran N. 2° 03' W., on a re-survey line bet. secs. 31 and 36.

Over mountainous land through heavy cedar and scattering sage brush.

Done.

- .10 Gulch, course SE;
 Asc. over broken ledges and boulders.
 40.59 Set an iron post, 3 ft. long, 1 in. in dia., $\frac{1}{2}$ in. in the ground, far $\frac{1}{2}$ sec. cor. on T. 12 S., R. 9 E., sec. 31, with brass cap mkd.

10 S 31
 1912.

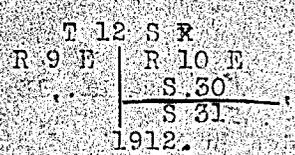
Post surrounded by mound of stone; impossible to set it over 12 ins. in the ground.

Resurvey E. bdy. T. 12 S., R. 9 E. - Continued.

A pinon pine, 12 ins. dia., bears S. 47° 30' E., 72 lks.
dist. mkd. S 31 B T.

00 Top of ridge, 1400 ft. above Tp. cor., bears NE and SW.
Leave ledges and desc. more gradually through boulders
of sandstone.

18 Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the
ground, for cor. of secs. 30 and 31, with brass cap mkd.



From which

A mahogany 6 ins. dia., bears N. 29° E., 96 lks.
dist. mkd. T 12 S R 10 E S 30 B T.

A mahogany, 7 ins. dia., bears S. 14° E., 85 lks.
dist. mkd. T 12 S R 10 E S 31 B T.

I find no trace of the old cor.

Land, very rough and rugged mountains, precipitous
ledges on S. 70.00 chs.

Timber, cedar and pinon pine.

Soil, sandy loam about 1 ft. deep. Subsoil, rock.

Undergrowth, sage and mahogany.

Good grass for grazing.

Mountainous or heavily timbered land, 81.18 chs.

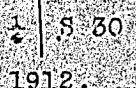
N. 2° 05' 2" W., on a resurvey line along west bdy. sec. 30.

Over mountainous land, through heavy timber and dense
undergrowth.

Desc. along west face of steep mountain and large sand-
stone boulders.

40.59 Find no trace of the old cor.

Set an iron post, 3 ft. long, 1 in. in dia., 16 ins. in the
ground, on rock, and surrounded by mound of stone, for
1/2 sec. cor. with brass cap mkd.



Resurvey E. bdy. T. 12 S., R. 9 E. - Continued.

Chains

from which

A red pine, 8 ins. dia., bears S. 70° E., 32 lks.
dist. mkd. S 30 B T.

66.60 Bottom of hollow, 800 ft. below sec. cor., course W.

Asc.

71.70 Top of ridge, 200 ft. above hollow, bears E. and W.

Desc.

81.18 No trace of the old cor.

Set an iron post, 3 ft. long, 3 ins. in dia., 16 ins. in the
ground, on rock, and surrounded by mound of stone, for cor.
of secs. 19 and 30, with brass cap mkd.

T 12 S	R 10 E
R 9 E	S 19
	S 30
1912.	

From which

A pinon pine, 8 ins. dia., bears N. 57° E., 86 lks.
dist. mkd. T 12 S R 10 E S 19 B T.

A pinon pine, 24 ins. dia., bears S. 25° E., 14 lks.
dist. mkd. T 12 S R 10 E S 30 B T.

Land, mountainous steep and rough

Soil, sandy mixed with rock, and sandstone boulders.

Subsoil, rock.

Timber, cedar, mahogany, red, white, and yellow pine, and pinon pine.

Undergrowth, oak, service berry, and scrub brush.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 81.18 chs.

October 12, 1912: At this cor. I set off 7° 28' S, on the decl.

arc; and at 11 h 47 m a.m., l.m.t., I observe the sun on
the meridian, the resulting lat. is 39° 45' N., which is the
proper lat. nearly.

N. 2° 03' W., on a resurvey line along W. bdy. sec. 19.

Resurvey N. bdy. T. 12 S., R. 9 E. - Continued.

ins

Over mountainous land, through heavy timber and dense undergrowth.

Desc. over sandstone ledges and boulders.

14.20 Bottom of hollow, 300 ft. below cor., course S. 70° W.

Asc. abruptly over ledges and boulders

23.00 Top of spur, 300 ft. above hollow, bears N. 70° E. and S. 70° W.

Leave ledges, bears same

Desc.

27.00 Leave heavy and enter scattering timber, bears E. and W.

28.50 Bottom of hollow, 100 ft. below ridge, course S. 60° W.

Asc.

40.59 Find no trace of the old cor.

Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for 3 sec. cor., with brass cap mkd.

$\frac{1}{2}$ | S 19
 1912.

And raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

52.50 Divide ridge, 800 ft. above hollow, bears N. 75° W. and S. 75° E.

Leave timber, bears E. and W.

Desc.

81.18 The cor. of secs. 13, 18, 19, and 24.

Land, mountainous.

Soil, loam mixed with rock; 3rd rate.

Timber, cedar and pinon pine.

Undergrowth, oak and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 81.18 chs.

October 12, 1912.

John R. Stewart
 U. S. Surveyor.

Oct. 14: At 7h 46m a.m. 1st set off 39° 43' N., on the lat. arc, 8° 07' S.

Retracement South July T. 12 S., R. 9 E. - Continued.

Chains on the decl. arc; and determine a meridian with the pole at the cor. of Tps. 12 and 13 S., Rs. 9 and 10 E.
 Thence I run
 West, on a retracement line bet. secs. 1 and 38.
 Over mountainous land; through scattering timber and dense undergrowth.

Asc.
 7.76 Top of ridge, 200 ft. above cor., bears N. 20° W. and S. 20° E.
 Desc.

14.00 Bottom of hollow, 100 ft. below ridge, course S. 20° E.
 Asc.

22.75 Top of ridge, 500 ft. above hollow, bears N. and S.
 Desc.

39.00 Fall 6 lbs; S. of the witness cor. to 1 sec. cor., on top of ledges, bears N. and S., which is a sandstone, 6x9x8 ins., above ground, firmly set, and mkd. and witnessed as described by the surveyor general.

Note: From this point the line descends over ledges and across the town of Castle Gate where it would be almost impossible to chain; therefore I place a flag on the D. & R. G. R. R. track in Price River canon, and measure a base South 16.43 chs. to point from which the flag bears N. 62° W. and from the flag the south end of base bears S. 62° E. I calculate the distance as follows:

$$\tan 62^\circ \times \text{base or } 1.88075 \times 16.43 \text{ equals } 30.90$$

which added to 39.00 chs. makes

69.90 D. and R. G. R. R. track, bears N. 60° W. and S. 60° E.

71.29 Price River, 2 ft. deep, 80 lbs. wide, rocky bottom, course S. 60° E.

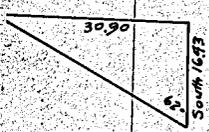
72.34 NW. cor. of Hotel building bears S. 1.00 chs. dist.
 The Depot bears N. 1.75 chs. dist.

73.33 SE. cor. of Frame house 10x20 ft. on line.

74.20 Ascend mountain, bears NW and SE.

75.30 Coal bed, 4 ft. thick, bears NW and SE.

Note: This is the coal bed from which the Utah Fuel Co. obtains its coal; the main workings are about 20.00 chs.



Retracement South bdy. E. 12 S., R. 9 E., -Continued.

- Chains
SE 1/4 of this point.
- 79.80 Fall 12 S. of the cor. of secs. 1, 2, 35, and 36, which is a sandstone, 8x10x6 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general. The course of this line is therefore N. 89° 55' W., 79.80 chs.
Land, mountainous.
Soil, sandy and clay lean; 2nd rate.
Timber, cedar and pinon pine.
Undergrowth, oak, and sage brush.
Good grass.
Mountainous or heavily timbered land, or land covered with dense undergrowth, 79.80 chs.
October 14, 1912: At this cor. I set off 28° 12' S., on the decl. arc; and at 11 h 46 m a.m., l.m.t., I observe the sun on the meridia the resulting lat. is 39° 45' N., which is the proper lat. nearly.
- West, on a retracement line bet. secs. 2 and 35.
Over mountainous land; through scattering timber and dense undergrowth.
Asc.
- 8.00 Top of ridge, 100 ft. above cor., bears N. and S.
Desc.
- 34.00 Head of swale, 150 ft. below ridge, course N.
- 36.00 Top of ridge, 100 ft. above swale, bears N. and S.
Desc.
- 40.09 Fall 17, lks. N. of the sec. cor. bet. secs. 2 and 35, which is a sandstone, 10x10x4 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general.
- 74.00 Head of hollow, 150 ft. below ridge, course S. 70° E.
Asc.
- 80.18 Top of ridge, 100 ft. above hollow, bears NE and SW.
Fall 35 lks. N. of the cor. of secs. 2, 3, 34, and 35 which is a sandstone, 5x9x8 ins., above ground, poorly set, and mkd.

Retracement S. 1/2 T. 12 S., R. 9 E. - Continued.

Chains

as described by the surveyor general.

I destroy the old cor. and re-establish it in the same place as follows:

Set an iron post, 5 ft. long, 5 ins. in dia., 24 ins. in the ground, for cor. of secs. 2, 3, 34, and 35, with brass cap mkd.

T 12 S R 9 E	
S 34	S 35
S 3	S 2
T 15 S R 9 E.	
1912.	

From which

A mahogany, 6 ins. dia., bears N. 65° E., 45 lks.

dist. mkd. T 12 S R 9 E S 35 B T.

A red pine, 6 ins. dia., bears S. 17° E., 5 lks.

dist. mkd. T 13 S R 9 E S 2 B T.

A mahogany, 5 ins. dia., bears S. 52° 30' W., 16 lks.

dist. mkd. T 13 S R 9 E S 3 B T.

A mahogany, 4 ins. dia., bears N. 17° W., 45 lks.

dist. mkd. T 12 S., R. 9 E S 34 B T.

The course of this mile is therefore S. 89° 45' W., 80.18 chs.

Land, mountainous.

Soil, sandy loam; 2nd rate.

Timber, cedar and pinon pine and mahogany.

Undergrowth, oak, service berry, and sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.18 chs.

October 14, 1912.

October 15, 1912: At 7 h 46 m. p. m., l. n. t., I set off 39° 45'

N., on the lat. arc; 8° 30' S., on the decl. arc; and determine

meridian with the solar, at the cor. of secs. 2, 3, 34, and

35.

Thence I run,

West, on a retracement line bet. secs. 3 and 34.

40.00 Find notice of 1/2 sec. cor. Set temp. 1/2 sec. cor.

Retracement S. bdy. T. 12 S., R. 9 E.

<p>Chains 80.00</p>	<p>Find no trace of cor. of secs. 3, 4, 33 and 34. Set temp. cor. October 15, 1912: At this cor. I set off 8°35'S. on the decl. arc; and at 11h 46m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39°43'N., which is the proper lat. nearly.</p>
<p>40.00 80.00</p>	<p>West, on retracement line bet. secs. 4 and 33. Find no trace of the $\frac{1}{4}$ sec. cor. Set temp. cor. Find no trace of the old cor. Set temp. cor. October 15, 1912.</p>
<p>40.00 80.00</p>	<p>October 16, 1912: At 7h 46m a.m., l.m.t., I set off 39° 43'N. on the lat. arc; 8°52'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 3, 4, 33 and 34. (temporary cor) Thence I run West, on a retracement line bet. secs. 5 and 32. Find no trace of the old cor. Set temp. cor. Find no trace of the old cor. of secs. 5, 6, 31 and 32. Set temp. cor. October 16, 1912: At this cor. I set off 8°57'S. on the decl. arc; and at 11h 46m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39°43'N., which is the proper lat. nearly.</p>
<p>40.00 81.52</p>	<p>West, on retracement line bet. secs. 6 and 31. Find no trace of the old cor. Set temp. $\frac{1}{4}$ sec. cor. Fall 514 lks. N. of the cor. of Tps. 12 and 13 S., Rs. 8 and 9 E., which is an iron post 3 ins. dia., extending 12 ins. above ground, firmly set and mkd. and witnessed as described by the surveyor general.</p>

Chains

The falling answers to a correction of 55 minutes per mile to the north, and the length of each mile will be by the following proportion: $\frac{318.22}{78.22} = \frac{240.00}{79.04}$; 80.03 chs. except the west mile which will be 79.04 chs.

October 16, 1912.

October 17, 1912: At 7h 45m a.m., l.m.t., I set off 39° 43' N. on the lat. arc; 9° 14' S. on the decl. arc; and determine a meridian with the solar at the cor. of Tps. 8 and 9 S., Rs. 8 and 9 E.

Thence I run

N. 89° 05' E., on a true line bet. secs. 6 and 31.

Over mountainous land, through heavy timber and dense undergrowth.

Asc.

10.00 Top of ridge, 200 ft. above cor., bears N. and S.

Desc.

28.00 Bottom of canon, 400 ft. below ridge, course S.

Asc.

I obtain the point for $\frac{1}{4}$ sec. cor. from following proportion: $\frac{78.22}{79.04} = \frac{40.00}{40.42} = \frac{38.22}{38.62}$

38.62 Set an iron post 3 ft. long, 1 in. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone

for $\frac{1}{4}$ sec. cor. with brass cap mkd.

S 31

S 6
1912

from which

A balsam, 10 ins. dia., bears N. 25° E., 20 lks. dist., mkd. $\frac{1}{4}$ S 31 B. T.

A pinon pine, 4 ins. dia., bears S. 25° E., 16 lks. dist., mkd. $\frac{1}{4}$ S 6 B. T.

No trace of the old cor.

48.00 Top of ridge, 450 ft. above hollow, bears N. 10° E. and S. 10° W.
Desc.

Resurvey S. bdy. T. 12 S., R. 9 E. - Continued.

- 78.00 Bottom of canon, 500 ft. below ridge, course S. 20° E.
Asc.
- 79.04 Find no trace of the old cor.
Set an iron post, 3 ft. long, 23 ins. in dia., 24 ins. in the ground, for cor. of secs. 5, and 16 (I set this cor. for the south sections knowing that closing corners will be required for the sections north) with brass cap mkd.

T 12 S R 9 E

S 6	S 5
1912.	

From which

A red pine, 16 ins. dia., bears S. 55° E., 21 lks.
dist. mkd. T 13 S R 9 E S 5 B T.

A white pine, 5 ins. dia., bears S. 25° W., 121 lks.
dist. mkd. T 13 S R 9 E S 6 B T.

Land, mountainous steep and rough.

Soil, clay loam mixed with gravel; 2nd rate.

Timber, cedar, red, white, and piñon, pine.

Undergrowth, mahogany and oak.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 79.04 chs.

October 17, 1912: At this cor. I set off 9° 19' S., on the decl. arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 45' N., which is the proper lat. nearly.

N. 89° 05' E., on a resurvey line bet. secs. 5 and 32.

Over mountainous land; through dense undergrowth and scattering timber.

Asc.

- 25.70 Top of ridge, 500 ft. above canon, bears N. and S.

Dene. abruptly.

- 40 41 1/2 Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for 1/2

Resurvey S. hdy. T. 12 S., R. 9 E. - Continued.

Chains

sec. cor. with brass cap mkd.

$$\begin{array}{r} \frac{S \ 32}{S \ 5} \\ 1912. \end{array}$$

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N of cor.

~~50.00~~ No trace of the old cor.

50.00 Bottom of canon, 500 ft. below ridge, course S. 40° E.

Asc.

80.85 Find no trace of the old cor.

Set an iron post, 5 ft. long, 3 ins. in dia., 16 ins. in the ground, on rock, and surrounded by mound of stone, for cor. of secs. 4 and 5, with brass cap mkd.

$$\begin{array}{c} T. 12 S. R. 9 E. \\ \hline S. 5 \quad S. 4 \\ T. 13 S., R. 9 E. \\ 1912. \end{array}$$

From which

A mahogany, 4 ins. dia., bears S. 54° E., 33 lks. dist., mkd. T. 13 S. R. 9 E. S. 4 B. T.

A balsam, 6 ins. dia., bears S. 50° W., 34 lks. dist., mkd. T. 13 S. R. 9 E. S. 5 B. T.

Land, mountainous steep and rough

Timber, pine and cedar and balsam.

Undergrowth, mahogany and oak brush.

Soil, clay loam, 2nd rate.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.85 chs.

October 17, 1912.

October 18, 1912. At 7 h 45 m a.m., l.m.t., I set off 39° 45' N., on the lat. arc; 9° 36' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 4 and 5.

Thence I run

N. 89° 05' E., on a resurvey line along N. hdy. sec. 4.

Over mountainous land, through dense undergrowth and

Resurvey S. bdy. T. 12 S., R. 9 E. -Continued.

Chains

scattering timber.

Asc.

8.00 Top of ridge, 100 ft. above cor., bears N. and S.

Desc.

26.00 Bottom of canon, 500 ft. below ridge, course S.

Asc.

40.41 $\frac{1}{2}$ Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.
$$\begin{array}{r} \frac{1}{2} \\ S \quad 35 \\ S \quad 4 \\ \hline 1912 \end{array}$$

And raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
No trace of old cor.

56.00 Top of ridge, 600 ft. above hollow, bears N. and S.

Desc.

74.00 Head of hollow, 200 ft. below ridge, course SE.

Asc.

80.83 Set an iron post, 5 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 5 and 4, with brass cap mkd.

$$\begin{array}{c} T \ 12 \ S \ R \ 9 \ E \\ \hline S \ 4 \quad S \ 3 \\ T \ 13 \ S \ R \ 9 \ E \\ \hline 1912 \end{array}$$

Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
Land, mountainous.

Soil, rich loam; 2nd rate.

Subsoil, gravel.

Timber, cedar and pine.

Undergrowth, mahogany and oak.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth.

80.83 chs.

October 18, 1912: At this cor. I set off 9°41' S., on the decl. arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39°45' N., which is the proper lat. nearly.

Chains

N. 89° 05' E., on a resurvey line along N. hdy. sec. 3 .
Over mountainous land; through dense undergrowth and
scattering timber.

Asc.

3.00 Top of ridge, 100 ft. above cor., bears N. and S.

Desc.

14.00 Bottom of hollow, 100 ft. below ridge, course S.

Asc.

36.00 Top of ridge, 300 ft. above hollow, bears N. and S.

Desc.

40.41 $\frac{1}{2}$ Set an iron post, 3 ft. long, 1 in. in dia., 14 ins. in the
ground, on rock, and surrounded by mound of stone, for 1
sec. cor., with brass cap mkd.

$$\begin{array}{r} \frac{5}{8} \frac{34}{3} \\ 1912. \end{array}$$

And raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
No trace of the old cor.

55.00 Bottom of banon, 400 ft. below ridge, course N.

Asc.

80.85 The cor. of secs. 2, 5, 34, and 35.

Land, mountainous .

Soil, clay mixed with gravel.; 2nd rate.

Timber, cedar and pine.

Undergrowth, mahogany.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.85 chs.

October 18, 1912.

John R. Stewart

U. S. Surveyor.

BOUNDARIES OF T. 12 S., R. 9 E.

Latitudes, Departures and Closing Errors.

Lines Designated	True Bearing	Dist. Chs.	Latitudes.		Departures.	
			N. Chs.	S. Chs.	E. Chs.	W. Chs.
West Boundary	North	454.03	454.03			
North	"	S.89°40'E.	21.18		.12	21.18
"	"	S.89°30'E.	40.35		.35	40.35
"	"	S.89°32'E.	40.46		.33	40.46
"	"	S.89°29'E.	40.44		.36	40.44
"	"	S.89°31'E.	161.68		1.36	161.67
"	"	S.89°26'E.	39.90		.40	39.90
"	"	S.89°21'E.	39.76		.45	39.76
"	"	S.89°32'E.	40.20		.33	40.20
"	"	S.89°43'E.	39.96		.20	39.96
"	"	North	1.49	1.49		
"	"	East	11.03			11.03
East	"	S.1°00'W.	81.38		81.37	1.42
"	"	S.0°32'W.	38.38		38.38	.36
"	"	S.0°34'W.	83.40		83.40	.82
"	"	S.2°03'E.	243.54		243.38	8.71
South	"	N.89°55'W.	79.80	.12		79.80
"	"	S.89°45'W.	80.18		.35	80.18
"	"	S.89°05'W.	321.53		5.14	321.49
Convergency					.61	
Totals			455.64	455.92	484.27	484.07
				455.64	484.07	
Error in lat. and dep.				.28	.20	

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Page

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191 _____, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

For final oath of U.S. Surveyor see book "P" T. 14 S., R. 2 W.

_____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191 _____

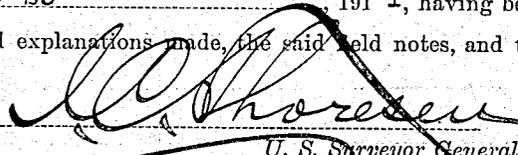


APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Salt Lake City, Utah, Oct. 30, 1915.

The foregoing field notes of the ~~survey~~ of retracement and resurvey of the East and South boundaries of Township No. 12 South, Range No. 9 East of the Salt Lake Base and Meridian, Utah,

executed by _____ John R. Stewart _____
under his special instructions dated _____ May 23 _____, 191 _____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the retracements and re-surveys they describe, are hereby approved.



U. S. Surveyor General.

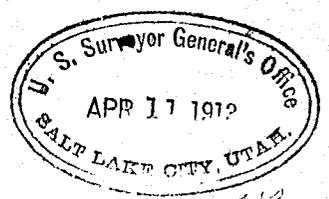
I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

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EP.
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BOOK A-409

FIELD NOTES

ME

OF THE SURVEY OF THE

RESURVEY AND SURVEY

OF THE

SUBDIVISION

OF

TOWNSHIP NO. 13 SOUTH, RANGE NO. 9 EAST

Of the SALT LAKE BASE AND Meridian,

the State of U. T. A. H.

EXECUTED BY

JOHN B. STEWART AND CLAUDE L. HEIST

in the capacity of U. S. Surveyor and Transitman under instructions dated May 23, 1911, issued by the United States Surveyor General to govern surveys included in Group No. 13, which were approved by the Commissioner of the General Land Office, July 3, 1911, pursuant to authority contained in the Act of Congress dated _____, 1911.

Survey commenced October 9, 1912,

Survey completed November 7, 1912.

BOOK A-409

INDEX DIAGRAM.

Township -----, Range -----

6	5	4	3	2	1
7	8	9	10	11	12
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19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Resurvey Subdivision T. 12 S., R. 9 E.

Chains

Survey commenced October 9, 1912 and executed with a Young and Sons light mountain transit No. 8517 with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc; which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the meridian at Salt Lake City, found correct, and was approved by the surveyor general for Utah.

I examine the adjustments of the instrument and correct the level and collimation errors; then, to test the solar apparatus by comparing its indications resulting from solar observations made during p.m. and a.m. hours with a meridian established by Polaris observations; I proceed as follows:

At the cor. of secs. 1, 2, 35 and 36 on S. bdy. Tp. which is a sandstone 8x10x6 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general, latitude 39°43'27"N., longitude 110°54'07"W., I set off 39°43'N. on the lat. arc; 6°22'S. on the decl. arc; and at 3h 47m p.m., l.m.t., I determine a meridian with the solar and mark a point thereof on a stone firmly set in the ground 5.00 chs. N. of the cor. At 6h 20.7m p.m., l.m.t., I observe Polaris at eastern elongation in accordance with the Manual and mark a point in the line thus determined by a tack driven in a wooden plug set in the ground 5.00 chs. N. of the cor.

October 9, 1912.

October 10, 1912: At 7h 30m a.m., l.m.t., I lay off the azimuth of Polaris 1°31' to the west and mark a point in the meridian thus determined by cutting a small groove in the stone already set 5.00 chs. N. of the cor, this mark falls 0.30 ins. east of the meridian determined with the solar.

Chains

At 7h 47m a.m., l.m.t., I set off $39^{\circ}43'N.$ on the lat. arc and $6^{\circ}38'S.$ on the decl. arc; and mark the meridian determined with the solar by a cross on the stone already set 5.00 chs. N. of the cor.; this mark falls 0.27 ins. east of the meridian established by Polaris observation. The solar apparatus by p.m. and a.m. observations defines positions for meridians respectively about 0'16" west and 0'14" east of the meridian established by Polaris observation; therefore I conclude that the instrument is in adjustment.

The magnetic bearing of the meridian at 8h 0m a.m. is $N.16^{\circ}46'W.$, the angle thus determined gives the mag. decl. $16^{\circ}46'E.$

From the cor. of secs. 1, 2, 35 and 36 on S.bdy. of Tp., which is a sandstone 8x10x6 ins. above ground, firmly set and mkd. and witnessed as described by the surveyor general. Thence I run

North, bet. secs. 35 and 36, on retracement line, over mountainous land; through dense undergrowth. Desc. abruptly.

- 8.25 Price River, 100 lks. wide, 2 ft. deep, in Price River Canon, 200 ft. below cor., course $S.60^{\circ}E.$ Asc.
- 11.18 SE. cor. of house 18 x 25 ft.
- 14.26 D. and R.G.R.R. track bears $N.31^{\circ}44'W.$ and $S.31^{\circ}44'E.$ Telephone line from Castlegate to Colton parallel with track.
- 14.77 D. and R.G.R.R. track bears same.
- 15.30 D. and R.G.R.R. track bears same.
- 17.09 Wagon road, bears $N.30^{\circ}W.$ and $S.30^{\circ}E.$ Telephone line bears with road.
- 17.78 The SE. cor. of house 25 x 50 ft.
- 21.30 NW. cor. of house 25 x 50 ft.
- 28.00 House 30 x 40 ft. on line.

Survey Sub. T 12 S., R. 9 E.-Continued.

Chains

35.20 Barn 20x15 ft. on line.

And abruptly, bears NW and SE.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

S 35	S 36
1912.	

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. October 10, 1912; At this cor. I set off $6^{\circ}42'S.$, on the decl. arc; and at 11 h 47 m a. m., l. m. t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}44'N.$, which is the proper lat. nearly.

57.15 Perpendicular ledge, 150 ft. high, bears ~~xxxx~~ NW and SE. Enter heavy timber, bears NW and SE.

80.00 Set an iron post, 5 ft. long, 2 ins. in dia., 20 ins. in the ground, on rock, and surrounded by mound of stone, for cor. of secs. 25, 26, 35, and 36, with brass cap mkd.

T 12 S R 9 E	
S 26	S 25
S 35	S 36
1912.	

From which

A pinon pine, 10 ins., bears $N.16^{\circ}E.$, 24 lks.
dist. mkd. T 12 S R 9 E S 25 B T.

A pinon pine, 8 ins. in dia., bears $S.79^{\circ}E.$, 10 lks.
dist. mkd. T 12 S R 9 E S 36 B T.

A pinon pine, 12 ins. in dia., bears $S.86^{\circ}W.$, 49 lks.
dist. mkd. T 12 S R 9 E S 35 B T.

A cedar, 12 ins. dia., bears $N.67^{\circ}W.$, 82 lks.
dist. mkd. T 12 S R 9 E S 26 B T.

Land, mountainous

Soil, clay loam and loose rock.

Timber, cedar and pine.

Undergrowth, sage brush service berry, and mahogany.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

Note: I found no trace of the witness corners on this line.

Chains

October 10, 1912.

October 11, 1912: At 7 h 47 m a.m., l.m.t., I set off 59°44' N on the lat. arc; 7°00' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 25, 26, 35, and 36.

Thence I run East, on a striction line bet. secs. 25 and 36 Knowing from resurvey of east bdy. of Tp. that the line will fall out of limits.

Over mountainous land; through heavy timber.

Asc. through undergrowth.

2.60 Top of spur, 50 ft. above cor., bears N. 20° E. and S. 20° W.

Desc. abruptly over ledges.

19.90 Bottom of hollow, 375 ft. below ridge, course S. 20° W.

Asc. abruptly over ledges.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, on rock, and surrounded by mound of stone, for 1/2 sec. cor., with brass cap rkd.

S. 25
S. 36
1912.

From which

A cedar, 6 ins. dia., bears S. 57° 45' W., 27 lks.

dist. rkd. S. 36 P. T.

A spruce, 14 ins. dia., bears N. 24° 15' W., 45 lks.

dist. rkd. S. 25 P. T.

I found no trace of old WC¹ corner.

October 11, 1912: At this cor. I set off 7° 05' S., on the decl. arc; and at 11 h 47 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 59° 44' N., which is the proper lat. nearly.

56.50 Top of spur, 960 ft. above hollow, bears N. 25° E. and S. 25° W.

Desc. abruptly over ledges.

62.40 Head of hollow, 110 ft. below spur, course S. 20° W.

Asc. abruptly over ledges.

Sub.T.12 S., R.9 E.-Continued.

Chains

76.68 Intersect E.bdy.of Tp., 128 lks.S.2°05'E., of the cor.of
secs.30, and 31, described in retracement of E.bdy.of Tp.
Set an iron post, 3 ft.long, 2 ins.in dia., 24 ins.in the
ground, for closing cor.of secs.25 and 36, with brass cap mkd.

T 12 S	
R 9 E	R 10 E
S 25	S 30
S 36	S 31
	C
1912.	

From which

A mahogany, 5 ins.dia., bears S.49°W., 11 lks.
dist..mkd.T 12 S R 9 E S 36 B E.

A mahogany, 6 ins.dia., bears N.17°W., 66 lks.
dist..mkd.T 12 S R 9 E S 25 B E.

Land, mountainous.

Soil, clay and loose rock.

Timber, pinon pine, and mahogany.

Undergrowth, sage, oak, and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, 76.68 chs.

October 11, 1912.

October 12, 1912: At 7 h 47 m a.m., l.m.t., I set off 39°44'N.,
on the let.arc; 7°25'B., on the decl.arc; and determine a
meridian, with the solar, at the cor.of secs.25, 26, 35, and
36.

North, on a sectional Guide Meridian, bet.secs.25 and 26.

Over mountainous land; through heavy timber.

Asc.over ledges and boulders.

18.15 Top of ridge, 190 ft.above cor., bears E.and W.

Desc.over ledges and boulders.

Leave heavy timber, bears E.and W.

33.00 Enter heavy timber, bears NW and SE.

40.00 Set an iron post, 3 ftlong, 1 in.in dia., 26 ins.in the
ground, for $\frac{1}{2}$ sec.cor.; with brass cap mkd.

Chains

S 26	S 25
1912.	

From which

A cedar, 14 ins. dia., bears N. 15° 30' E., 32 lks.
dist. mkd. $\frac{1}{2}$ S 25 B T.

A cedar, 14 ins. dia., bears N. 82° 30' W., 187 lks.
dist. mkd. $\frac{1}{2}$ S 26 B T.

October 12, 1912: At this cor. I set off 7° 28' S., on the decl. arc; and at 11 h 47 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 45' N., which is the proper lat. nearly.

59.00 Bottom of hollow, 800. ft. below ridge, course SW.

Asc over ledges.

80.00 Set an iron post, 5 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 23, 24, 25, and 26, with brass cap mkd.

T 12 S., R.9 E.	
S 25	S 24
S 26	S 25
1912.	

From which

A pinon pine, 8 ins. dia., bears N. 86° E., 68 lks.
dist. mkd. T 12 S R 9 E S 24 B T.

A pinon pine, 8 ins. dia., bears S. 64° E., 65 lks.
dist. mkd. T 12 S R 9 E S 25 B T.

A pinon pine, 12 ins. dia., bears S. 17° W., 21 lks.
dist. mkd. T 12 S R 9 E S 26 B T.

A cedar, 16 ins. dia., bears N. 7° W., 11 lks.
dist. mkd. T 12 S R 9 E S 25 B T.

Land, mountainous .

Soil, clay mixed with rock; 3rd rate.

Subsoil, rock.

Timber, cedar, pinon pine, and spruce.

Undergrowth, sage, oak, and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, 80.00 chs.

October 12, 1912.

Chains

October 14, 1912: At 7 h 46 m a.m., l.m.t., I set off $59^{\circ}45'N.$, on the lat. arc; $8^{\circ}07'S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 23, 24, 25, and 26.

Thence I run

For reasons already explained

East on a true line bet. secs. 24 and 25.

Over mountainous land; through heavy timber and scattering undergrowth.

Desc. over ledges and boulders.

7.50 Head of hollow, 200 ft. below cor., course $S. 50^{\circ}W.$

Asc. over ledges and boulders.

24.00 Top of ridge, 640 ft. above hollow, bears N. and S.

Desc. over ledges and boulders.

39.10 Top of sloping ledge, 75 ft. high, bears N. and S.

Note: The point for $\frac{1}{2}$ sec. cor. will fall on this ledge and cannot be set; therefore at this point,

Set an iron post, 5 ft. long, 1 in. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for witness cor. to $\frac{1}{2}$ sec. cor. with brass cap mkd.

T 12 S R 9 E

S 24 W C
S 25

1912.

From which

A pinon pine, 24 ins. dia., bears $S. 35^{\circ}30'W.$, 16 lbs.

dist. mkd. W C $\frac{1}{2}$ S 25 B T

A pinon pine, 11 ins. in dia., bears $N. 66^{\circ}W.$, 99 lbs.

dist. mkd. W C $\frac{1}{2}$ S 24 B T.

October 14, 1912: At this cor. I set off $8^{\circ}12'S.$, on the decl. arc; and at 11 h 46 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $59^{\circ}45'N.$, which is the proper lat. nearly.

40.00 Point falls on ledge, Cor. cannot be set.

59.25 Bottom of hollow, 850 ft. below ridge, course $S. 25^{\circ}W.$

Asc. abruptly over ledges.

75.61 Intersect E. bdy. of Tp. 12.63 chs. $S. 2^{\circ}05'E.$, of the cor. of secs.

Sub. T. 12 S., R. 9 E. -Continued.

Chains

13, and 30, heretofore described.

Set an iron post, 5 ft. long, 2 ins. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for closing cor. of secs. 24 and 25, with brass cap mkd.

	T 12 S	
R 9 E		R 10 E
		S 19
S 24	C	S 30
S 25	C	

1912.

From which

A red pine, 8 ins. dia., bears N. 22° W., 58 lks.
dist. mkd. T 12 S R 9 E S 24 B T.

A pinon pine, 12 ins. dia., bears S 62° W., 25 lks.
dist. mkd. T 12 S R 9 E S 25 B T.

Land, mountainous.

Soil, clay and rocky; 3rd rate.

Timber, cedar, pinon pine, and spruce.

Undergrowth, sage, service berry, and oak brush.

Good grass for grazing.

Mountainous or heavily timbered land, 73.61 chs.

October 14, 1912.

October 15, 1912 At 7 h 46 m a.m., l.m.t., I set off 39° 45' N. on the lat. arc; 8° 30' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 23, 24, 25, and 26.

Thence I run

North, on Sectional Guide Meridian bet. secs. 23 and 24.

Over mountainous land; through heavy timber.

Asc.

22.80 Top of ridge, 415 ft. above cor., bears N.E. and SW.

Desc. over ledges.

Leave heavy and enter scattering timber, bears NE and SW.

Enter dense undergrowth, bears NE and SW.

40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for sec. cor., with brass cap mkd.

Sub.T.12 S.,R.9 E.-Continued.

Chains

S 23	S 24
$\frac{1}{2}$	
1912.	

From which

A pinon pine, 16 ins. dia., bears N. 51° 30' E., 143 lks.

dist. mkd. $\frac{1}{2}$ S 24 B T.

A spruce, 8 ins. dia., bears S. 74° W., 26 lks.

dist. mkd. $\frac{1}{2}$ S 23 B T.

40.25 Head of hollow, 350 ft. below ridge, course S. 25° W.

Asc.

49.85 Top of ridge, 325 ft. above hollow, bears NE and SW.

Leave timber, bears NE and SW.

Desc.

61.00 Head of hollow, 100 ft. below ridge, course N. 70° W.

Asc.

74.85 Top of spur, 100 ft. above hollow, bears N. 80° E and S. 80° W.

Desc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 13, 14, 23, and 24, with brass cap mkd.

T 12	S R 9 E
S 14	S 13
S 23	S 24
1912.	

And raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Land, mountainous steep and rough.

Soil, clay mixed with rock; 2nd and 3rd rate.

Subsoil, rock.

Timber, cedar, spruce and pinon pine.

Undergrowth, sage, service berry, oak, and buck brush.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 15, 1912: At this cor. I set off 8° 35' S., on the decl. arc; and at 11 h 46 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 45' N., which is the proper lat. nearly.

Sub.T.12 S,R.9 E.-Continued.

Chains

For reasons already explained I run
 East, on a true line bet. secs. 13 and 24.
 Over mountainous land; through dense undergrowth.
 Asc.

13.70 Top of spur, 170 ft. above cor., bears N.10°W. and S.10°E.
 Desc.

13.90 Enter aspen timber, bears N. and S.

18.50 Head of hollow, 160 ft. below ridge, course N.20°W.
 Leave timber, bears NW and SE.

40.00 Top of spur, 100 ft. above hollow, bears N. and S.
 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the
 ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{S}{S} \frac{13}{24}$

1912.

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

56.50 Wash, 6 lks. wide, 8 ft. deep, in bottom of hollow, 50 ft. below
 spur, course NW.

Asc.

70.50 Intersect E. bdy. of Tp., 3.78 chs. S.2°05'E., of the cor. of sec.
 13, 18, 19 and 24, heretofore described. I destroy marks
 pertaining to secs. 13 and 24, and
 Set an iron post, 5 ft. long, 3 ins. in dia., 24 ins. in the
 ground, for closing cor. of secs. 13 and 24. with brass cap
 mkd.

T.12 S., R.9 E.
 R 9 E R 10 E
 S 13 C S 19
 S 24 C

1912.

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land mountainous

Soil, clay loam mixed with rock; 3rd rate.

Timber, aspen.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered
 with dense undergrowth, 70.50 chs.

October 15, 1912.

Chains

October 16, 1912: At 7h 46m a.m., l.m.t., I set off 39°46' N. on the lat. arc; 8°52'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 13, 14, 23 and 24.

Thence I run

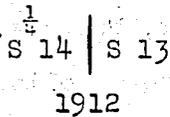
North on a Sectional Guide Meridian, bet. secs. 13 and 14. Over mountainous land, through dense undergrowth. Desc. through scattering timber.

22.10 Creek, 6 lks. wide, 6 ins. deep, in bottom of Sulphur Canon, 500 ft. below sec. cor., course S.60°W. Asc.

23.18 Road, bears N.60°E. and S.60°W.

24.05 Telephone line from Castlegate to Colton, bears N.60°E. and S.60°W:

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground on rock and surrounded by mound of stone for 1/4 sec. cor. with brass cap mkd.

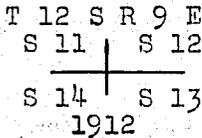


And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

47.00 Top of ridge, 400 ft. above canon, bears E. and W. Desc. gradually over rolling land.

78.90 Bottom of hollow, 160 ft. deep, course E. Asc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground for cor. of secs. 11, 12, 13, and 14, with brass cap mkd.



And raise a mound of stone, 2 ft. base, 1 1/2 ft. high W. of cor. Land mountainous. Soil clay and sandy loam 1st and 2nd rate. Timber aspen, maple, cedar and pinon pine. Undergrowth sage, buck, oak and service berry. Good grass for grazing.

Mountainous or heavily timbered land or land covered with dense undergrowth, 80.00 chs.

Sub. T. 12 S. R. 9 E.-Continued.

Chains	
	<p>October 16, 1912: At this cor. I set off $8^{\circ}57'S.$ on the decl. arc, and at 11h 46m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}47'N.$ which is the proper lat. nearly.</p>
	<p>For reasons already explained I run East on a true line bet. secs. 12 and 13. Over rolling mountainous land, through dense undergrowth. Desc.</p> <p>9.00 Wash 4 ft. deep, 10 lks. wide, in bottom of hollow, 50 ft. deep, course $N.10^{\circ}E.$ Asc.</p> <p>32.96 A log cabin 12x16 ft., bears $N.41^{\circ}10'E.$, claimant unknown. A log cabin 12x12 ft. bears $N.55^{\circ}20'E.$, claimant unknown. Enter scattering timber, bears N. and S.</p> <p>33.90 Top of ridge, 50 ft. above hollow, bears NE. and SW. Desc.</p> <p>40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground for $\frac{1}{4}$ sec. cor. mkd. on brass cap</p> <div style="text-align: center;"> $\frac{1}{4}$ $\frac{S \ 12}{S \ 13}$ 1912 </div> <p>And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor.</p> <p>41.22 Telephone line from Castlegate to Colton, bears $N.20^{\circ}E.$ and $S.20^{\circ}W.$</p> <p>41.47 Road, bears $N.20^{\circ}E.$ and $S.20^{\circ}W.$</p> <p>42.86 Creek, 5 lks. wide, 4 ins. deep in Sulphur Canon, 200 ft. below ridge, course $S.20^{\circ}W.$ Asc.</p> <p>63.10 Top of ridge, 30 ft. above canon, bears NE. and SW. Desc.</p> <p>A log cabin bears $N.14^{\circ}30'W.$ Claimant unknown.</p> <p>71.26 Creek, 2 lks. wide, 3 ins. deep, in bottom of hollow, 100 ft.</p>

Sub. T. 12 S., R. 9 E. -Continued..

Chains

course N.

Asc.

- 71.26 Intersect E. bdy. of Tp. 7.15 chs. S. 0°34' W. of the cor. of secs. 7, 12, 13, and 18, heretofore described. I destroy all marks on this corner pertaining to secs. 12 and 13, and set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 12 and 13, with brass cap mtd.

	T 12 S	
R 9 E	R 10 E	
	S 7'	
S 12	C	S 18
S 13	C	
		1912

Dig pits, 24x18x12 ins. crosswise on each line N. and S. of post, 3 ft. . . . and W. of post 7 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, mountainous.

Soil, clay and sandy loam; 1st rate.

Timber, aspen pinon pine, and cedar.

Undergrowth, oak, buck, service berry, and sage brush.

Good grass for grazing.

October 16, 1912.

October 17, 1912: At 7 h 45 m a.m., l.m.t., I set off 59°47' N., on the lat. arc; 9°14' E., on the decl. arc; and determine a meridian, with the solar, at the cor. of secs. 11, 12, 13, and 14. Thence I run

North, on a Sectional Guide Meridian, bet. secs. 11 and 12.

Over rolling mountainous land; through dense undergrowth.

Asc.

- 4.50 Top of ridge, 50 ft. high; bears NE and SW.

Desc.

- 14.60 Bottom of hollow, 50 ft. deep, course NW.

Asc.

- 28.59 Top of ridge, 40 ft. above hollow, bears NW and SE.

Desc.

- 40.00 Set an iron post; 3 ft. long, 1 in. in dia., 26 ins. in the

Sub.T.12 S.;R.9 E.-Continued.

Chains

ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

$\frac{1}{2}$	
S 11	S 12
1912.	

Dig pits, 18x18x12 ins., N. and S. of post, 5 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

80.00 Set an iron post, 5 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 1, 2, 11, and 12, with brass cap mkd.

T 12 S	R 9 E
S 2	S 1
S 11	S 12
1912	

Dig pits, 18x18x12 ins. in each sec. 5 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, rolling mountains.

Soil, sandy loam; 1st rate.

No timber.

Undergrowth, oak, sage, and buck, brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.00 chs.

October 17, 1912 At this cor. I set off $9^{\circ}19' S.$, on the decl. arc; and at 11 h 45 m a.m., l.n.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}48' W.$, which is the proper lat. nearly.

For reasons already explained I run East, on a true line bet. secs. 1 and 12.

Over rolling mountainous land; through dense undergrowth. Asc.

30.50 Telephone line from Castle Gate to Colton, bears N. $68^{\circ} W.$ and S. $68^{\circ} E.$

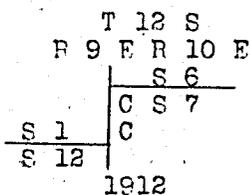
40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{1}{2}$	
S 1	S 12
1912.	

Dig pits, 18x18x12 ins., N. and W. of post, 5 ft. dist.; and raise

Sub.T.12 S., R.9 E.- Continued.

- Chains.
- a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high N. of cor.
- 43.97 Wash, 10 lks. wide, 4 ft. deep, course NW.
- 44.85 Road, from Colton to Price and Theodore, bears N. 65° W. and S. 65° E.
- 55.00 Top of ridge, 50 ft. high, bears NW. and SE.
Desc.
- 62.90 Old railway track, bears N. $68^\circ 15'$ W. and SE. (abandoned).
- 72.18 Intersect E. bdy. of Tp. 7.07 chs. S. 1° W. of the cor. of secs. 1, 6, 7, and 12, heretofore described. I destroy all marks on this corner pertaining to secs. 1 and 12, and Set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 1 and 12, with brass cap mkd.



Dig pits 24 x 18 x 12 ins. crosswise on each line N. and S. 3 ft., and W. of post 7 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high W. of cor.

Land, rolling mountainous.

Soil, sandy loam; 1st rate.

No timber.

Undergrowth, sage, buck, and oak brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth
72.18 chs.

North, on a sectional guide meridian, bet. secs. 1 and 2
Over rolling, mountainous land; through dense undergrowth;
Descend.

- 2.00 Leave undergrowth, bears NW. and SE.
- 2.13 Road, from Colton to Price and Theodore, bears NW. and SE.
- 10.00 A house 20 x 15 ft., belonging to Thomas Arrowsmith, bears west 6.00 chs. dist.

Sub.T.12 S., R.9 E.- Continued.

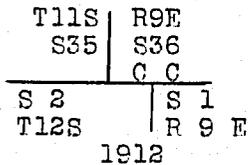
- Chains.
- 10.15 Box spring, bears west 5.00 chs.dist.
- 12.62 Telephone line, Castlegate to Colton,bears E.and W.
- 13.17 Spring branch, 2 lks.wide, 2 ins.deep, course W.
- 13.67 Old railroad track, bears N.67°20'W. and SE.(Abandoned).
- 18.40 Top of ridge,50 ft.above spring branch,bears E.and W.
Desc.
- 25.00 Bottom of hollow,50 ft.below spur, course W. Ascend.
- 32.80 Top of spur, 50 ft.above hollow,bears E.and W.Desc.
- 39.60 Creek, 1 lk.wide, 1 in.deep, course SW.
- 40.00 Set an iron post, 3 ft.long, 1 in.in dia., 26 ins.in the
ground, for $\frac{1}{4}$ sec.cor., with brass cap mkd.



and raise a mound of stone, 2 ft.base, $1\frac{1}{2}$ ft.high W.
of cor.

- 40.40 Wash, 4 lks.wide, 3 ft.deep, course SW.
- 46.04 Intersect N.bdy.of Tp.17.00 chs.S.89°32'E.of the cor.of
secs.35 and 36, which is an iron post, 3 ft.long, 3 ins
in dia., mkd.and witnessed as described by the Survey-
or General.

Set an iron post 3 ft.long,2 ins.in dia., 24 ins.in the
ground, for closing cor.of secs.1 and 2, with brass
cap mkd.



and raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft.high S.of cor

Note: Ralph Gentry, U.S.Surveyor, in a subsequent re-
tracement of the S.bdy.of T.11 S., R.9 E.,determined
this closing distance to beS.89°32'E.18.49 chs.

Land, rolling.

Soil, sandy loam and clay; 1st and 2nd rate.

No timber. Undergrowth, sagebrush.Good grass for grazing.

Mountainous land, or land covered with dense undergrowth

46.04 chs.

October 17,1912.

Sub.T.12 S.,R.9 E.-Continued.

Chains

October 18, 1912: At 7 h 45 m a.m., l.m.t., I set off $59^{\circ}43'N$. on the lat. arc; $9^{\circ}36'S$. on the decl. arc; and determine a meridian with the solat, at the cor. of secs. 2, 5, 34, and 35, on S. bdy. of Tp., heretofore described.

Thence I run

North, bet. secs. 34 and 35 (S. 60.00 chs. is retracement)

Over mountainous land; through heavy timber and dense undergrowth.

Desc. ledges.

5.05 Granite ledge, 12 ft. high, bears NE and SW.

11.20 Enter scattering timber, bears E. and W.

40.00 Find no trace of the old cor.

Set an iron post, 3 ft. long, 1 in. in dia., 20 ins. in the ground, on solid rock, and surrounded by mound of stone, for sec. cor. with brass cap mtd.

S 34 | S 35

1912.

From which

A pine, 4 ins. dia., bears N. $10^{\circ}E$., 93 lks. dist. mtd. S 35 B T.

A pine, 4 ins. dia., bears N. $32^{\circ}W$., 59 lks. dist. mtd. S 34 B T.

October 18, 1912: At this cor. I set off $9^{\circ}42'S$. on the decl. arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}44'N$., which is the proper lat. nearly.

41.00 Canon, 1240 ft. deep, course N.

Asc. over ledges and boulders.

53.80 Foot of perpendicular granite ledge, bears E. and W.

Note: I search diligently at foot of this ledge but fail to find old witness cor.

58.49 Top of ridge, 925 ft. above canon, bears E. and W.

Desc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 26 ins. in the ground, for cor. of secs. 26, 27, 34, and 35, with brass cap mtd.

Sub. T. 12 S., R. 9 E. -Continued.

Chains

T. 12 S., R. 9 E.	
S 27	S 26
S 34	S 35

1912.

From which

A pinon pine, 5 ins. dia., bears N. 71° E., 65 lks.
dist. mtd. T 12 S., R. 9 E. - S 26 B T.

A pinon pine, 6 ins. dia., bears N. 62° W., 96 lks.
dist. mtd. T 12 S R 9 E S 27 B T.

And raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

There are no other trees within limits;

Land mountainous,

Soil, clay mixed with rock; 3rd and 4th rate.

Timber, pine, and cedar.

Undergrowth, oak, buck, service berry, and sage brush.

Good grass for grazing

Mountainous land, or land covered with dense undergrowth,
80.00 chs.

October 18, 1912.

October, 19, 1912. At 7 h 45 m a.m. l.m.t., I set off 59° 44' N.,
on the lat. arc; 9° 58' S., on the decl. arc; and determine a
meridian with the solar, at the cor. of secs. 26, 27, 34, and 35.

Thence I run

East, on a retracement random line bet. secs. 26 and 35.

19.00 Find no trace of the old witness cor.

40.00 Find no trace of the old sec. cor.

Set temp. sec. cor.

60.32 Find no trace of the witness cor. to secs. 25, 26, 35, and 36.

80.12 Intersect N. and S. line, 28 lks. S. of the cor. of secs. 25, 26,
35, and 36.

Thence I run

S. 89° 48' W., on a true line bet. secs. 26 and 35.

Over mountainous land; through heavy timber.

Desc.

12.00 Leave heavy and enter scattering timber, bears N. and S.

Sub.E.12.S.,R.9 E.-Continued.

- Chains Enter dense undergrowth, bears N. and S.
Foot of descent, bears N. and S.
Enter bottom of Price River Canon.
- 21.85 Price River, 50 lks. wide, 3 ft. deep, rapid current, rocky
bottom, in bottom of Price River canon, 600 ft. below
sec. cor., course S. 60° E.
- 35.20 Wash, 10 ft. deep, 30 lks. wide, course SE.
- 37.28 Telephone line, Castle Gate to Colton, bears N. W. and S. 20°
E.
- 40.06 Set an iron post, 3 ft. long, 1 in. in dia., 14 ins. in the
ground, on rock, and surrounded by mound of stone, for 1st
sec. cor. with brass cap mkd.
- $\frac{1}{2}$
 $\frac{S}{S} \quad \frac{26}{35}$
 1912.
- And raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
October 19, 1912: At this cor. I set off 10° 03' S., on the decl.
arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the
meridian, the resulting lat. is 39° 44' N., which is the proper
lat. nearly.
- 40.22 Telegraph line, bears N. 60° 20' W. and SE.
- 40.97 D. and R. G. R. R. track, bears N. 63° 20' W. and S. 63° 20' E.
- 41.32 D. and R. G. R. R. Track, bears same
- 52.00 Leave canon bottom, bears N. 60° W. and S. 60° E.
Enter scattering timber, bears N. 60° W. and S. 60° E.
Asc. abruptly.
- 57.50 Top of spur, 250 ft. above canon, projects NE.
Desc.
- 69.20 Bottom of hollow, 175 ft. deep, course NE.
Asc. abruptly.
- 80 12 The cor. of secs. 26, 27, 34, and 35.
Top of spur, 500 ft. above hollow, bears NE and SW.
Land, mountainous.
Soil, clay mixed with rock; 2nd and 3rd rate.
Timber, pinon pine, cedar, pine, aspen, and cottonwood.
Undergrowth, oak, sage, service berry, and buck brush.
Good grass for grazing.
Mountainous heavily timbered, or land covered

Sub.T.12 S.,R.9 E.-Continued.

Chains

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.12 chs.

October 19, 1912.

Claude S. Heist

U.S. Transitman.

October 21, 1912: At 7 h 45 m a.m., l.m.t., I set off $39^{\circ}44'N$. the lat. arc; $10^{\circ}41'S$. on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 26, 27, 34, and 35.

Thence I run

$N.0^{\circ}01'W$., bet. secs. 26 and 27.

Over mountainous land; through dense undergrowth and scattering timber.

Desc.

12.50 Bottom of hollow, 550 ft. below cor., course $N.81^{\circ}E$.

Asc. abruptly through heavy timber; bears E. and W.

27.25 Top of spur, 300 ft. above hollow, bears $N.75^{\circ}E$, and $S.75^{\circ}W$.

Desc.

57.80 Head of hollow, 320 ft. below spur, course $N.E$.

Asc.

40.00 Top of spur, 100 ft. above hollow, bears NE and SW .

Set an iron post, 3 ft. long, 1 in. in dia., 20 ins. in the ground, on solid rock, and surrounded by mound of stone, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{1}{2}$ |
S 27 | S 26
1912.

From which

A yellow pine, 20 ins. dia., bears $N.45^{\circ}E$, 193 lks.
dist. mkd. $\frac{1}{2}$ S 26 B T.

A pinon pine, 6 ins. dia., bears $S.74^{\circ}W$, 73 lks.
dist. mkd. $\frac{1}{2}$ S 27 B T.

October 21, 1912: At this cor. I set off $10^{\circ}46'S$, on the

Sub. T. 12 S., R. 9 E. - Continued.

declared; and at 11 h. 45 m. a. m., Jan. 11, I observe the sun on the meridian, the resulting lat. is $39^{\circ}45'N.$, which is the proper lat. nearly.

66.00 Bottom of hollow, 170 ft. below ridge, course NE.

Asc.

70.60 Top of spur, 100 ft. above hollow, bears NE and SW.

Desc.

70.80 Price River, 150 lks. wide, 5 ft. deep, in bottom of Price River canon, 950 ft. below ridge, course $S.45^{\circ}E.$

Asc.; leave timber.

74.87 D. and R. G. R. R. Track, bears $N.47^{\circ}55'W.$ and $S.47^{\circ}35'E.$

75.15 D. and R. G. R. R. track, bears same

76.20 Telegraph line, bears same

76.90 Begin abrupt ascent, bears NW and SE.

Enter heavy timber, bears NW and SE.

77.98 Telephone line, from Castlegate to Colton, bears $N.45^{\circ}W.$ and $S.45^{\circ}E.$

80.00 Spur, 175 ft. above canon, bears N. E. and SW.

Set an iron post, 3 ft. long, 2 ins. in dia., 20 ins. in the ground, on rock, and surrounded by mound of stone, for cor. of secs. 22, 25, 26, and 27, with brass cap mkd.

T 12	S R 9 E
S 22	S 23
S 27	S 26
1912.	

From which

A pinon pine, 12 ins. in dia., bears $N.67^{\circ}E.$, 102 lks. dist. mkd. T 12 S R 9 E S 25 B. T.

A pinon pine, 12 ins. dia., bears $S.22^{\circ}E.$, 36 lks. dist. mkd. T 12 S R 9 E S 26 B. T.

A cedar, 4 ins. dia., bears $S.20^{\circ}W.$, 9 lks. dist. mkd. T 12 S R 9 E S 27 B. T.

A spruce, 6 ins. dia., bears $N.16^{\circ}W.$, 15 lks. dist. mkd. T 12 S R 9 E S 22 B. T.

Land, mountainous.

Soil, clay and loose rock, 3rd rate.

Timber, spruce, pinon pine, cedar, mahogany, aspen and cottonwood.

Undergrowth, oak, sage, buck, and service berry brush.

Chains

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 21, 1912.

October 22, 1912: At 7 h 45 m a.m., 1. m. t., I set off $39^{\circ}45'$ at the 1st. arc; $11^{\circ}02'S.$, on the decl. arc, and determine a meridian with the solar, at the cor. of secs. 22, 23, 26, and 27.

Thence I run

N. $39^{\circ}43'E.$, on a random line bet. secs. 23 and 26.

40.00 Set temp. $\frac{1}{2}$ sec. cor.

80.14 Intersect N. and S. line, 3 lks. N. of the cor. of secs. 23, 24, 26 and 26.

Thence I run

S. $39^{\circ}49'W.$, on a true line bet. secs. 23 and 26.

Over mountainous land; through heavy timber, and dense undergrowth.

Asc.

12.10 Top of ridge, 100 ft. above cor., bears NE and SW.

Desc.

23.40 Head of hollow, 120 ft. below ridge, course SW.

Asc.

32.70 Top of spur, 100 ft. above hollow, bears NW and SE.

Leave heavy and, enter scattering timber, bears NW and SE.

Desc. along south slope of ridge.

40.07 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

S 25
S 26
1912.

From which

A pinon pine, 14 ins. dia., bears $S. 85^{\circ}W.$, 251 lks. dist. mkd. S 26 B T.

Sub.T.12 S.,R.9 N.-Continued.

Chains

No other trees within limits; raise a mound of stone,
2 ft. base, 1½ ft. high, N. of cor.

October 22, 1912: At this cor. I set off $11^{\circ}07'18''$ S., on the
decl. arc; and at 11 h 45 m a.m., l.m.t., I observe the sun
on the meridian, the resulting lat. is $39^{\circ}45'N.$, which is
the proper lat. nearly.

45.00 Enter heavy timber, bears NE. and SW.

51.00 Head of hollow, course SW.

Asc.

65.55 Top of spur, projects SW.

Desc.

64.00 Leave heavy and enter scattering timber, bears NE and SW.

71.80 Enter heavy timber, bears NE and SW.

80.14 The cor. of secs. 22, 23, 26, and 27.

Land, mountainous.

Soil, clay and loose rock; 2nd and 3rd rate.

Timber, pinon pine, cedar and pine.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass.

Mountainous or heavily timbered land, or land covered with
dense undergrowth, 80.14 chs.

October 22, 1912.

October 23, 1912: At 7 44 m a.m., l.m.t., I set off $39^{\circ}45'N.$,
on the lat. arc; $11^{\circ}23'19''$ S., on the decl. arc; and determine a
meridian with the solar, at the cor. of secs. 22, 23, 26, and
27.

Thence I run

$N.0^{\circ}01'W.$, bet. secs. 22 and 23.

Over mountainous land; through heavy timber, and dense
undergrowth.

Asc.

15.90 Rocky spur, projects SW.

Desc.

Sub. T. 12 S., R. 9 E. -Continued-

Chains

37.10 Telephone line from Gastlegater to Colton, bears N. 50° E. and S. 50° W.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. with brass cap mkd.

$\frac{1}{4}$	
S 22	S 23

1912. From which

A spruce, 6 ins. dia., bears S. 6° 30' E., 43 lks. dist. mkd. $\frac{1}{4}$ S 23 B T.

A cottonwood, 18 ins. dia., bears S. 60° 30' W., 12 lks. dist. mkd. $\frac{1}{4}$ S 22 B T.

October 23, 1912: At this cor. I set off 11° 28' S., on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 46' N., which is the proper lat. nearly.

40.65 Sulphur Creek, 3 lks. wide, 6 ins. deep, in bottom of Sulphur Canon, 500 ft. below ridge, course S. 50° W.

Asc. over lodges and boulders.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 14, 15, 22, and 23, with brass cap mkd.

T 12	S R 9 E
S 15	S 14
S 22	S 23

1912. From which

A cedar, 5 ins. dia., bears N. 13° E., 86 lks. dist. dist. mkd. T 12 S R 9 E S 14 B T.

A cedar, 12 ins. dia., bears S. 89° E., 21 lks. dist. mkd. T 12 S R 9 E S 23 B T.

A cedar, 10 in. dia., bears N. 19° W., 136 lks. dist. mkd. T 12 S R 9 E S 15 B T.

No other trees within limits; raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

Land, mountainous very rough.

Soil, clay and rocky; 3rd rate.

Subsoil, rock.

Timber, cedar, pinon pine, and cottonwood.

Undergrowth, buck, sage, service berry, and oak, brush.

Good grass for grazing.

Sub. T. 12 S., R. 9 E. -Continued.

Chains

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 23, 1912.

October 24, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}46' N.$, on the 1st. arc; $11^{\circ}44' S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 14, 15, 22, and 23.

Thence I run

$N. 69^{\circ}49' E.$, on a random line bet. secs. 14 and 23.

40.00 Set temp. $\frac{1}{2}$ sec. cor.

80.10 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 13, 14, 23, and 24.

Thence I run

$S. 89^{\circ}51' W.$, on a true line bet. secs. 14 and 23

Over mountainous land; through dense undergrowth.

Desc.

22.50 Sulphur creek, 3 lks. wide, 3 ins. deep in bottom of Sulphur Canon, 250 ft. below sec. cor., course $S. 25^{\circ} W.$

Asc.

Enter heavy timber, bears N. and S.

23.75 Telephone line, Castle Gate to Colton, bears $N. 25^{\circ} E.$ and $S. 25^{\circ} W.$

40.05 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$$\begin{array}{r} \frac{S}{S} \frac{14}{23} \\ 1912. \end{array}$$

From which

A pinon pine, 8 ins. dia., bears $N. 80^{\circ} E.$, 57 lks.

dist. mkd. $\frac{1}{2}$ S 14 B T.

A pinon pine, 10 ins. dia., bears $S. 15^{\circ} E.$, 63 lks.

dist. mkd. $\frac{1}{2}$ S 23 B T.

48.80 Top of spur, projects $S. 45^{\circ} E.$

Desc.

Sub.E.12 S.,R.9 E.-Continued.

- Chains
- 59.00 Bottom of hollow, 780 ft. deep, course SE.
Asc.
- 75.40 Top of spur, projects, S. 15° E.
Desc.
- 80.10 The cor. of secs. 14, 15, 22, and 23.
Land, mountainous.
Soil, clay loam and rocky; 3rd rate.
Timber, cedar, pine, and aspen.
Undergrowth, sage, oak, buck, and service berry brush.
Good grass for grazing.
Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.10 chs.
October 24, 1912: At this cor. we set off 11° 49' S., on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 46' N., which is the proper lat. nearly.
- 11.0° 01' W., bet. secs. 14 and 15.
Over mountainous land; through scattering timber and dense undergrowth.
Asc.
- 17.00 Leave timber and enter dense undergrowth, bears NW and SE.
- 18.00 Top of ridge, 200 ft above cor., bears NE and SW.
Desc. over rolling mountainous land.
- 35.00 Enter scattering aspen timber, bears E. and W.
- 40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for 1/2 sec. cor. with brass cap mtd.
- S 15° 1/2 S 14
1912.
- Dig pits, 18x12x12 ins., N and S. of post, 5 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.
- 65.50 Bottom of hollow, 60 ft. deep, course NW.
Asc.
- 76.00 Top of ridge, 40 ft. above hollow, bears NW and SE.
Desc.

Chains

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 10, 11, 14, and 15, with brass cap mkd.

T 12	S R 9 E
S 10	S 11
S 15	S 14
1912.	

And raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Land, mountainous and rolling.

Soil, clay and sandy loam; 2nd and 3rd rate.

Timber, pinon pine, cedar, and aspen.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 24, 1912.

October 25, 1912: At 7 h 44 m a.m., l.m.t., I set off 39°47' N., on the lat. arc; 12°05' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 10, 11, 14, and 15.

Thence I run

N. 89°51' E., on a random line bet. secs. 11 and 14

40.00 Set temp. ¼ sec. cor.

80.14 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 11, 12, 13, and 14.

Thence I run

S. 89°53' W., on a true line bet. secs. 11 and 14.

Over rolling mountainous land; through dense undergrowth. Asc.

13.50 Low ridge, bears NE and SW.

Desc.

34.70 Bottom of hollow, 25 ft. deep, course N.

Asc.

40.07 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for ¼ sec. cor. with brass cap mkd.

Sub.T.12 S., R.2E.-Continued.

Chains

$$\begin{array}{r} \frac{1}{2} \\ \hline S \quad 11 \\ S \quad 14 \\ 1912. \end{array}$$

- And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 49.00 Top of low ridge, bears NE and SW.
Desc.
- 57.50 Head of hollow, 25 ft. deep, course NE.
Asc.
- 80.14 The cor. of secs. 10, 11, 14, and 15.
Land, rolling mountain.
Soil, clay and sandy loam about 2 ft. deep, 2nd rate.
No timber.
Undergrowth, oak, buck, and sage brush.
Good grass for grazing.
Mountainous land, or land covered with dense undergrowth,
80.14 chs.
October 25, 1912: At this cor. I set off $12^{\circ}10'S.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $59^{\circ}49'N.$, which is the proper lat. nearly:
- $N.0^{\circ}01'W.$, bet. secs. 10 and 11.
Over rolling mountainous land; through dense undergrowth.
Desc.
- 30.20 Bottom of hollow, 25 ft. deep, course NE.
Asc.
- 35.80 Top of spur, projects NE.
Descend.
- 40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.
- $$\begin{array}{r} \frac{1}{2} \\ \hline S \quad 10 \quad S \quad 11 \\ 1912. \end{array}$$
- And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 64.90 Bottom of hollow, 50 ft. deep, course NE.
Asc.
- 66.20 Top of spur, projects NE.
Desc.

Sub. T. 12 S. R. 9 E. - Continued.

Chains

80.00 Set an iron post, 3 ft. long, 2 ins. dia., 24 ins. in the ground, for cor. of secs. 2, 3, 10, and 11, with brass cap mkd.

T 12	S R 9 E
S 3	S 2
S 10	S 11
1912	

And raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. land, rolling mountain.

Soil, clay and sandy loam; 2nd rate.

No. timber.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.00 chs.

October 25, 1912.

October 26, 1912: At 7 h 44 m a.m., 1 m.t., I set off $39^{\circ}48'$ on the lat. arc; $12^{\circ}25'$ S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 2, 3, 10, and 11.

Thence I run

$N. 89^{\circ}53' E.$, on a random line bet. secs. 2 and 11.

40.00 Set temp. sec. cor.

80.12 Intersect N. and S. line, 5 1/2 km of the cor. of secs. 1, 2, 11, and 12.

Thence I run

$S 89^{\circ}58' W.$, on a true line bet. secs. 2 and 11.

Over rolling mountainous land, through dense undergrowth.

Asc.

7.00 Top of spur, projects NE.

Desc

13.40 Bottom of hollow, 50 ft. deep, course N.

Asc.

24.00 Top of ridge, bears NE and SW.

Desc.

37.50 Bottom of hollow, 50 ft. deep, course N.

Asc.

Sub.T.12 S.,R.9 E.-Continued.

40.06

Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$$\begin{array}{r} S \quad 2 \\ S \quad 11 \\ \hline 1912 \end{array}$$

Dig pits, 16x18x12 ins., E. and W. of post, 5 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

42.60 Top of spur, projects NE.

D6sc.

61.05 Crack, 2 lks. wide, 2 ins. deep, i bottom of hollow, 75 ft. deep, course N.

Asc.

68.40 Top of ridge, bears N. and S.

74.53 Bottom of hollow, 50 ft. deep, course N.

Asc.

80.12 The cor. of secs. 2, 3, 10, and 11.

Land, rolling mountainous.

Soil, clay and sandy loam; 2nd rate and rocky 3rd rate.

No timber.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth.

80.12 chs.

October 26, 1912: At this cor. I set off $12^{\circ}30'S.$, on the decl. arc; and at 11 h 44 m a.m. l.m.t., I observe the sun on the meridian, the resulting lat. is $59^{\circ}48'N.$, which is the proper lat. nearly.

$1.0^{\circ}03'W.$, bet. secs. 2 and 3.

Over rolling mountainous land; through dense undergrowth.

Desc.

39.10 Crack, 5 lks. wide, 3 ins. deep, in wash, 20 lks. wide, 10 ft. deep, course NW.

40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.
$$\begin{array}{r} \frac{1}{2} S \quad 3 \quad 5 \quad 2 \\ \hline 1912. \end{array}$$

Sub. T. 12 S., R. 9 E.- Continued.

Chains.

and raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of cor.

41.80 Top of ridge, bears NW. and SE. Desc.

46.68 Intersect N. bdy. of Tp. 17.95 chs. S. 89° 29' E. of the cor. of secs. 34 and 35, which is an iron post, 3 ins. dia., properly set, marked and witnessed as described by the surveyor general.

Set an iron post 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 2 and 3, with brass cap mkd.

T 11 S R 9 E	
S 34	S 35
	C C
S 3	S 2
T 12 S	R 9 E
1912	

and raise a mound of stone 2 ft. base, 1 1/2 ft. high S. of cor.

Note: Ralph Gentry, U.S. Surveyor, in a subsequent retracement of the S. bdy. of T. 11 S., R. 9 E., determined this closing distance to be S. 89° 26' E. 18.04 chs.

Land, rolling, mountainous.

Soil, sandy loam; 2nd rate.

No timber. Undergrowth, sagebrush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth 46.68 chs.

October 26, 1912.

Claude S. Heist
U.S. Transitman.

Survey commenced October 18, 1912, and executed with a K. and E. transit No. 20578, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc; which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the meridian at Salt Lake City, found correct, and was approved by the

Chains.

surveyor general for Utah.

I examine the adjustments of the instrument and correct the level and collimation errors; then, to test the solar apparatus by comparing its indications resulting from solar observations made during p.m. and a.m. hours with a meridian established by Polaris observations, I proceed as follows:

At the cor. of secs. 26, 27, 34, and 35, latitude $39^{\circ} 44' 19''$ N., longitude $110^{\circ} 55' 16''$ W., I set off $39^{\circ} 44'$ N. on the lat. arc; $9^{\circ} 43'$ S. on the decl. arc; and at 3h 45m p. m. l. m. t., I determine a meridian with the solar, and mark a point thereof on a stone firmly set in the ground 5.00 chs. N. of the cor.

October 18, 1912.

October 19, 1912: At 5h 35.5m a. m. l. m. t., I observe Polaris at western elongation, in accordance with the Manual, and mark a point thereof by a tack driven in wooden plug set in the ground 5.00 chs. N. of the cor.

At 7h 30m a. m. l. m. t., I lay off the azimuth of Polaris $1^{\circ} 31'$ east, and mark a point in the meridian thus determined by cutting a small groove in the stone already set 5.00 chs. N. of the cor.; this mark falls 0.4 ins. east of the meridian established by the solar.

At 7h 45m a. m. l. m. t., I set off $39^{\circ} 44'$ N. on the lat. arc; and $9^{\circ} 58'$ S. on the decl. arc; and mark the meridian determined by the solar, by a cross on the stone already set 5.00 chs. N. of the cor.; this mark falls 0.37 ins. east of the meridian determined by Polaris observation.

The solar apparatus by p. m. and a. m. observations defines positions for meridians respectively about $0' 21''$ west and $0' 19''$ east of the meridian established by Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h 30m a. m. is $N. 16^{\circ} 47' W.$, the angle thus determined gives the mag. decl. $16^{\circ} 47' E.$

Sub.T.12 S., R.9 E.-Continued.

Chains

Note: The south bdy. of Tp. (west 4 miles) is out of ^{here} limits in alignment and measurement; therefore I run West, on a Sectional Correction line bet. secs. 27 and 34. Over mountainous land; through scattering timber and dense undergrowth.

Desc.

27.00 Bottom of head of hollow, 500 ft. deep; course NE.

Asc. over ledges and boulders.

40.00 Set vtm iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for sec. cor. with brass cap mtd.

1
S 27
S 54
1912.

From which

A yellow pine, 20 ins. dia., bears N. 20° 30' E., 146 lks.
dist. mtd. S 27 B T.

A yellow pine, 26 ins. dia., bears S. 70° E., 86 lks.
dist. mtd. S 54 B T.

55.60 Top of ridge, 1000 ft. above hollow, bears N. and S.

Enter heavy timber, bears N. and S.

66.00 Begin abrupt descent over broken ledges and boulders.

bears NE and SW.

80.00 Set an iron post, 5 ft. long, 3 ins. in dia., 12 ins. in the ground, on solid rock, and surrounded by mound of stone, for cor. of secs. 27, 29, 33, and 34, with brass cap mtd.

T 12 S R 9 E
S 28 S 27
S 35 S 34
1912

From which

A red pine, 6 ins. dia., bears N. 25° E., 136 lks.
dist. mtd. T 12 S R 9 E S 27 B T.

A red pine, 10 ins. dia., bears S. 54° 30' W., 50 lks.
dist. mtd. T 12 S R 9 E S 34 B T.

A red pine, 8 ins. dia., bears S. 61° 30' W., 66 lks.
dist. mtd. T 12 S R 9 E S 33 B T.

A red pine, 4 ins. dia., bears N. 25° W., 78 lks.
dist. mtd. T 12 S R 9 E S 28 B T.

Land, mountainous, rough.

Sub. T. 12 S., R. 9 E. - Continued.

Chains

Soil, clay and rocky; 3rd rate.
 Timber, pine, spruce, cedar, and mahogany.
 Undergrowth, oak, service berry, buck, and sage brush.
 Good grass for grazing.
 Mountainous or heavily timbered land, or land covered with dense undergrowth, 30.00 chs.
 October 19, 1912: At this cor, I set off 10° 03' S., on the decl. arc; and at 11 h. 45 m. a. m., l. m. t., I observe the sun on the meridian, the resulting lat. is 39° 44' N., which is the proper lat. nearly.

West, on Sectional correction line bet. secs. 28 and 33.
 Over mountainous land; through scattering timber and dense undergrowth.

Desc.

19.00 Top of series of ledges leading down into and out of canon which drains north and which is at about 45.00 chs.

It would be very difficult to chain across the canon; therefore triangulate across as follows:

Set a flag on line on ridge on west side of canon and measure a base south 16.49 chs. to point from which the flag on west edge of canon bears N. 68° W.; and from the flag on west side of canon the south end of base bears S. 68° E. I calculate the distance across as follows:

$$\tan 68^\circ \times \text{base or } 2.47509 \times 16.49 \text{ makes } 40.81 \text{ chs.}$$

which added to 19.00 chs. makes

59.81 Top of ridge, 1000 ft. above canon, bears N. and S.

Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for witness cor. to $\frac{1}{2}$ sec. cor. with brass cap mtd.

T 12 S R 9 E

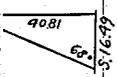
S. 28

W C S 33

1912

From which

A red pine, 8 ins. dia., bears N. 56° W., 40 lbs.



Sub.T.12 S.,R.9 E.-Continued.

Chains

dist.; mkd. W C $\frac{1}{2}$ S 38 E T.

A balsam, 6 ins. dia., bears S.15°W., 109 lks.

dist.; mkd. W C $\frac{1}{2}$ S 33 E T.

Desc.

64.00 Bottom of hollow, 150 ft. below ridge, course H.

Asc.

80.00 Set an iron post, 5 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 28, 29, 32, and 35, with brass cap mkd.

T 12	S R 9	E
S 29	S 28	
S 32	S 35	

1912

From which

A red pine, 9 ins. dia., bears N. 8° E., 135 lks.

dist.; mkd. T 12 S R 9 E S 23 E T.

An aspen, 4 ins. dia., bears S. 45° E., 9 lks.

dist.; mkd. T 12 S R 9 E S 35 E T.

An aspen, 4 ins. dia., bears S. 75° W., 21 lks.

dist.; mkd. T 12 S R 9 E S 32 E T.

A red pine, 7 ins. dia., bears N. 34° W., 111 lks.

dist.; mkd. T 12 S R 9 E S 29 E T.

Land, mountainous, very rough.

Soil, rocky about 1 ft. deep; 5rd rate and mountain loam; 1st rate.

Subsoil, rocky.

Timber, aspen, pine, and mahogany.

Undergrowth, oak, service berry, and choke cherry.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth.

80.00 chs.

October 19, 1912.

October 21, 1912: At 7 h 45 m a.m., l.m.t., I set off 59° 44' N. on the lat. arc; 10° 41' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 28, 29, 32, and 35.

Thence I run

Sub T.12 S., R.9 E.-Continued.

Chains

West, on a sectional Correction Line: bet. secs. 29 and 32.
Over mountainous land; through heavy timber and dense
undergrowth.

Asc.

4.40 Top of ridge, 50 ft. above cor., bears N. and S.

Desc.

17.50 Bottom of hollow, 500 ft. below ridge, course N. 15° E.

Asc. abruptly.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 20 ins. in the
ground, on rock, and surrounded by mound of stone, for
1/2 sec. cor. with brass cap mtd.

S	29
S	32
1912	

From which

A balsam, 4 ins. dia., bears N. 59° W., 53 lbs.

dist. mtd. T 12 S R 9 E S 29 B T.

A red pine, 5 ins. dia., bears S. 66° W., 53 lbs.

dist. mtd. T 12 S R 9 E S 32 B T.

October 21, 1912: At this cor. I set off 10° 46' S., on the decl.
arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the
meridian, the resulting lat. is 39° 44' N., which is the
proper lat. nearly.

Continue along north slope of high ridge.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the
ground, for cor. of secs. 29, 30, 31, and 32, with brass cap mtd.

T 12	S R 9 E
S 30	S 29
S 31	S 32
1912.	

From which

A red pine, 6 ins. dia., bears N. 42° E., 38 lbs.

dist. mtd. T 12 S R 9 E S 29 B T.

A red pine, 3 ins. dia., bears S. 84° E., 156 lbs.

dist. mtd. T 12 S R 9 E S 32 B T.

A red pine, 4 ins. dia., bears S. 45° W., 25 lbs.

dist. mtd. T 12 S R 9 E S 31 B T.

A balsam, 4 ins. dia., bears N. 22° W., 41 lbs.

Sub.T.12 S.,R.9 E.-Continued.

Chains

dist.;mkd.T 12 S R 9 E S 30 E T.

Land,mountainous.

Soil,mountain loam mixed with some rock;2rn rate.

Subsoil gravel.

Timber,pine,aspen,and mahogany.

Undergrowth,oak,service berry,choke cherry,elder berry,
and willows.

Good grass for grazing.

Mountainous or heavily timbered land,or land covered
with dense undergrowth,80.00 chs.

October 21,1912.

October 28,1912:At 7 h 44 m a.m.,l.m.t.,I set off $39^{\circ}44'N.$,
on the lat.arc; $15^{\circ}05'S.$,on the decl.arc;and determine a
meridian with the solar,at the cor.of secs.29,30,31,and 32.
Thence I run

West,on a Sectional Correction Line bet.secs.30 and 31.

Over mountainous land;through heavy timber and scattering
undergrowth.

Asc. along north slope of high ridge.

5.00 Leave heavy and enter scattering timber,and dense under-
growth,bears N.and S.40.00 Set an iron post,5 ft.long,1 in.in dia.,12 ins.in the
ground,on solid rock,and surrounded by mound of stone,
for $\frac{1}{2}$ sec.cor.with brass cap mkd.
$$\begin{array}{r} S \quad 30 \\ S \quad 31 \end{array}$$

1912

And raise a mound of stone,2 ft.base, $1\frac{1}{2}$ ft.high,N.of cor.

October 28,1912:At this cor.I set off $15^{\circ}11'S.$,on the
decl.arc;and at 11 h 44 m a.m.,l.m.t.,I observe the sun
on the meridian,the resulting lat.is $39^{\circ}44'N.$,which is the
proper lat.nearly.

41.00 Top of ridge,50 ft.above $\frac{1}{2}$ sec.cor.,bears N. $20^{\circ}W.$ and
S. $20^{\circ}E.$

Sub. T. 12 S., R. 9 E. - Continued.

meridian with the solar, at the cor. of secs. 27, 28, 33, and 34.

Note: Knowing from survey of S. bdy. of Tp., that this line will not close within limits;

I run

S. 0° 01' E., on a true line bet. secs. 33 and 34.

Over mountainous land; through heavy timber and scattering undergrowth.

Asc.

8.00 Top of ridge, 100 ft. above cor., bears N. 60° E. and S. 60° W.

Desc. over ledges and boulders.

22.00 Bottom of hollow, 500 ft. below ridge, course SE.

Asc.

31.99 Top of ridge, 200 ft. above hollow, bears N. 60° W. and S. 60° E.

From this ridge the line descend over ledges and boulders and, the $\frac{1}{2}$ sec. cor. point will come in the ledges where it will be impossible to perpetuate a cor.; therefore at this point,

Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for witness cor. to $\frac{1}{2}$ sec. cor. with brass cap mkd.

T 12 S R 9 E

S 33 | S 34
W C

1912.

From which

A red pine, 10 ins. dia., bears N. 25° E., 25 lks.
dist., mkd. W. C $\frac{1}{2}$ S 34 B T.

A cedar, 18 ins. dia., bears S. 40° W., 26 lks.
dist., mkd. W. C $\frac{1}{2}$ S 33 B T.

October 22, 1912: At this cor. I set off 11° 07' S., on the decl. arc; and at 11 h 45 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 44' N., which is the proper lat. nearly.

Desc. abruptly over a series of ledges.

40.00 Point of $\frac{1}{2}$ sec. cor. falls in ledges, not set.

49.00 Canon, 1400 ft. below ridge, course E.

Asc. abruptly over ledges.

Sub. T. 12 S., R. 9 E. - Continued.

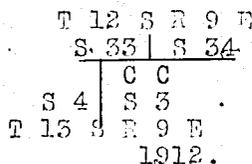
Chains

76.25 Top of ridge, 1500 ft. above canon, bears N. 75° W and S. 75° E.
Leave ledges.

Desc.

80.79 Intersect S. bdy. of Tp., 80 lks. N. 89° 05' E., of the cor. of
secs. 5 and 4, heretofore described.

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the
ground, for closing cor. of secs. 33 and 34, with brass cap m



From which

A mahogany, 6 ins. dia., bears N. 71° E., 51 lks.
dist. mkd. T 12 S R 9 E S 34 B T.

A mahogany, 5 ins. dia., bears N. 25° W., 52 lks.
dist. mkd. T 12 S R 9 E S 33 B T.

Land, mountainous.

Soil, clay-lean and rocky; 2nd and 4th rate.

Timber, cedar, red pine, and mahogany.

Undergrowth, oak, and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered
with dense undergrowth, 80.79 chs.

October 22, 1912.

October 23, 1912: At 7^h 44^m a.m., l.m.t., I set off 39° 44'
N., on the lat. arc; 11° 25' S., on the decl. arc; and determine
a meridian with the solar, at the cor. of secs. 27, 38, 35, and
34.

Thence I run

N. 0° 01' W., bet. secs. 27 and 28

Over mountainous land; through dense undergrowth and
scattering timber.

Desc. abruptly.

Sub.T.12 S.,R.9 E.-Continued

Chains

38.00 Bottom of Crandall Canon, 1200 ft. below canon, course NE.
Wash, 150 lks. wide, and 6 ft. deep, in bottom, course NE.
Asc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{1}{2}$	S 28	S 27
	1912.	

From which

A yellow pine, 7 ins. dia., bears N. 16° E., 46 lks.
dist. mkd. S 27 B T.

A yellow pine, 7 ins. dia., bears N. 32° W., 53 lks.
dist. mkd. S 28 B T.

October 23, 1912: At this cor. I set off 11° 28' S., on the
decl. arc; and at 11 h 44 m a.m. l.m.t., I observe the sun
on the meridian, the resulting lat. is 39° 45' N., which is the
proper lat. nearly.

40.45 Old road, bears NE and SW.

75.00 Top of ridge, 800 ft. above canon, bears E. and W.
Desc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the
ground, for cor. of secs. 21, 22, 27, and 28, with brass cap mkd.

T 12	S R 9	W
S 21	S 22	
S 28	S 27	
1912		

And raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, $\frac{1}{2}$ of cor.
Land, mountains steep and rough

Soil, sandy mixed with rock; 3rd rate.

Subsoil, rock.

Timber, cedar and pinon pine and a few yellow pine trees
in bottom of Crandall Canon.

Undergrowth, oak, and service berry.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.006hs.

October 23, 1912.

Sub. T. 12 S., R. 9 E. - Continued

Chains
 October 24, 1912: At 7 h 44 m. a. m., J. m. t., J. net off $39^{\circ}45'N$ on the lat. arc; $11^{\circ}44'S$, on the decl. arc, and determined meridian with the solar, at the cor. of secs. 21, 22, 27, and 28.

Thence I run East, on a random line bet. secs. 22 and 27.

40.00 Set temp. $\frac{1}{2}$ sec. cor.

80.12 Intersect N. and S. line, 12 lks. N. of the cor. of secs. 22, 23, 26, and 27.

Thence I run N. $89^{\circ}55'W$, on a true line bet. secs. 22 and 27.

Over mountainous land; through scattering timber and dense undergrowth.

Desc.

1.00 Telephone line, from Castlegate to Colton, bears N. and S.

2.30 Wire fence, bears N. 20 lks. thence W. and SE

3.70 Telegraph line, bears N. $30^{\circ}W$ and S. $30^{\circ}E$.

4.97 D. and R. G. R. R. track, bears N. $27^{\circ}57'W$ and S. $27^{\circ}37'E$.

5.40 D. and R. G. R. R. track, bears same

7.35 Price River, 150 lks. wide, 4 ft. deep, rocky bottom, in bottom of Price River canon, 200 ft. below cor., course SE.

Asc.

13.50 Top of spur, projects North.

Desc.

21.00 Bottom of hollow, 150 ft. deep, course NE.

Asc.

33.50 Top of spur, 570 ft. high, bears N. and S.

Desc.

40.06 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

$\frac{1}{2}$
 S 22
 S 27
 1912

From which

- A yellow pine, 12 ins. dia., bears N. $38^{\circ}W$, 350 lks. dist. mkd. $\frac{1}{2}$ S 22 B T.
- A spruce 12 ins. dia., bears S. $10^{\circ}30'W$, 193 lks.

Sub.T.12 S.,R.9 E.-Continued.

Chains

dist.mkd. $\frac{1}{2}$ S 27 E T.

October 24, 1912: At this cor. I set off $11^{\circ}49'$ S., on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}45'$ N, which is the proper lat. nearly.

4550. Creek, 2 lks. wide, 3 ins. deep, in bottom of Crandall Canon
550 ft. deep, course N. 25° E

Asc. over broken ledges.

80.12 The cor. of secs. 21, 22, 27, and 28.

Land, mountainous.

Soil, clay and loose rock; 3rd rate.

Timber, cedar pine, spruce, and cottonwood, and aspen.

Undergrowth, sage, oak, buck, and serviceberry, mahogany and willows.

Good grass for grazing.

Mountainous land, 80.12 chs.

October 24, 1912.

October 25, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}45'$ N, on the lat. arc; $12^{\circ}05'$ E., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 21, 22, 27, and 28.

Thence I run

N. $0^{\circ}01'$ W., bet. secs. 21 and 22.

Over mountainous land; through scattering timber and dense undergrowth.

Desc. along east slope of ridge.

33.00 Bottom of hollow, 475 ft. deep, course NE.

Asc.

39.00 Top of spur, projects NE.

Desc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

Sub.T.12 S.,R.9 E.-Continued

Chains

1	S 21	S 22
1912		

From which

A yellow pine, 24 ins. dia., bears N. 85° 30' E., 95 lbs.
dist. mkd. S 22 B T.

No other trees within limits; raise a mound of stone, 2 ft.
base, 1½ ft. high, W. of cor.

61.40 Enter dense undergrowth of aspen willows and cottonwood
timber, bears N. 75° W. and S. 75° E.

65.64 Price river, 80 lbs. wide, 3 ft. deep, in bottom of Price
river canon, 300 ft. below ½ sec. cor., course, S. 75° E.
Leave timber, bears N. 75° W. and S. 75° E.

65.40 D. and R. G. R. R. track, bears N. 75° 21' W. and S. 75° 21' E.

66.40 Telegraph line, bears N. 75° W. and S. 75° E.

78.00 Enter heavy timber, bears NW and SE.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 12 ins. in the
ground, on rock, and surrounded by mound of stone, for
cor. of secs. 15, 16, 21, and 22, with brass cap mkd.

T 12 S R 9 E X	
S 16	S 15
S 21	S 22
1912	

From which

A pinon pine, 18 ins. dia., bears N. 35° E., 35 lbs.
dist. mkd. T 12 S R 9 E S 15 B T.

A pinon pine, 6 ins. dia., bears S. 60° E., 145 lbs.
dist. mkd. T 12 S R 9 E S 22 B T.

A pinon pine, 8 ins. dia., bears S. 16° W., 176 lbs.
dist. mkd. T 12 S R 9 E S 21 B T.

A pinon pine, 12 ins. dia., bears N. 62° W., 52 lbs.
dist. mkd. T 12 S R 9 E S 16 B T.

Land, mountainous.

Soil, clay loam and rocky; 3rd rate.

Subsoil, rock.

Timber, cedar, pine, aspen, and cottonwood.

Undergrowth, oak, service berry, willows, sage, buck brush
and aspen saplings.

Good grass for grazing.

Sub. T. 12 S., R. 9 E. - Continued.

Mountains or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 25, 1912: At this cor. I set off $12^{\circ}10'S.$, on the decl. arc, and at 11 h. 44 m. a. m., l. m. t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}46'N.$, which is the proper lat. nearly.

$S. 89^{\circ}55'E.$, on a random line bet. secs. 15 and 22.

40.00 Set temp. 1 sec. cor.

80.10 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 14, 15, 22, and 25.

Thence I run

$N. 69^{\circ}53'W.$, on a true line, bet. secs. 15 and 22.

Over mountainous land; through heavy timber; and dense undergrowth.

Desc.

6.00 Bottom of hollow, 250 ft. deep, course $S. 20^{\circ}W.$

Asc.

15.00 Top of spur, projects South.

Desc.

21.50 Bottom of hollow, 100 ft. deep, course $S. 25^{\circ}E.$

Asc.

28.75 Top of ridge, bears NE and SW.

Leave ~~xxxx~~ heavy and enter scattering timber, bears NE and SW.

Desc. along northwest slope of ridge.

37.00 Enter heavy timber, bears NE and SW.

40.05 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for 1 sec. cor. with brass cap mkd.

$\frac{1}{S. 15}$
 $\frac{1}{S. 22}$
1912.

From which

A pinon pine, 8 ins. dia., bears $S. 30^{\circ}E.$, 12 lks.

dist. mkd. $\frac{1}{S. 22}$ B. T.

Chains
 A pinon pine, 6 ins. dia., bears N. 45° W., 18 lbs.
 dist. mkd. S 15 B E.

68.00 Leave heavy and enter scattering timber, bears N. and S.

75.50 Bottom of hollow, 950 ft. deep, course S. 10° W.
 Asc.

78.50 Top of spur, projects S. 3.00 chs.
 Desc. through heavy timber, bears N. and S.

80.10 The cor. of secs. 15, 16, 21, and 22.
 Land, mountainous.
 Soil, clay loam and loose rock, 3rd rate.
 Timber, pinon pine, spruce and cedar.
 Undergrowth, oak, buck, service berry, and mahogany.
 Good grass for grazing.
 Mountainous or heavily timbered land, or land covered
 with dense undergrowth, 80.10 chs.

October 25, 1912.

October 26, 1912: At 7 h 44 m a.m., l.m.t., I set off 39° 46' N., on the lat. arc; 12° 25' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 15, 16, 21, and 22.

Thence I run

N. 0° 01' W., bet. secs. 15 and 16.

Over mountainous land; through heavy timber and dense undergrowth.

Asc. over broken ledges along NE slope of ridge.

15.00 Top of spur, projects N. 70° W.

Desc.

27.50 Head of hollow, course NW.

Asc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for sec. cor., with brass cap, mkd.

S 16 | S 15
 1912.

Sub.T.12 S.,R.9 E.-Continued.

Chains

From which

A pinon pine, 6 ins. dia., bears S.56°E., 32 lbs.
dist..mkd. $\frac{1}{2}$ S 15 R T.

A pinon pine, 14 ins. dia., bears N.62°30'W., 115 lbs.
dist..mkd. $\frac{1}{2}$ S 16 R T.

61.15 Top of Main ridge, bears E. and W. 950 ft. above canon.

Nolan siding bears S.65°55'W.

Desc.

Leave timber, bears E. and W.

73.00 Bottom of hollow, 150 ft. deep, course S.60°W.

Asc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 9, 10, 15, and 16, with brass cap mkd.

T 12	S R 9 E
S 9	S 10
S 16	S 15
. 1912 .	

Dig pits, 18x18x12 ins. in each sec. 5 $\frac{1}{2}$ ft. dist.; and raise
a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, mountainous.

Soil, clay and rock; 3rd rate.

Timber, cedar and pinon pine.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass. For grazing.

Mountainous or heavily timbered land, or land, covered
with dense undergrowth, 80.00 chs.

October 26, 1912: At this cor. I set off 12°30'S., on the
decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun
on the meridian, the resulting lat. is 39°47'N., which is
the proper lat. nearly.

S. 39°53'E., on a random line bet. secs. 10 and 15.

40.00 Set temp. $\frac{1}{2}$ sec. cor.80.06 Intersect N. and S. line, 5 lbs. S. of the cor. of secs. 10, 11,
14, and 15.

thence I run

N. 89°55'W., on a true line bet. secs. 10 and 15.

Sub.T.12 S., R.9 E.-Continued.

Chains
Over rolling mountainous land; through dense undergrowth.
Desc.

12.90 Bottom of hollow, 100 ft. deep, course NE.
Asc.

20.00 Top of spur, projects NE.
Descend.

40.05 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$$\begin{array}{r} \frac{1}{2} \\ \frac{S}{S} \quad \frac{10}{15} \\ \hline 1912 \end{array}$$

Dig pits, 18x18x12 ins., N. and W. of post, 5 ft. dist.; and
raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
Bottom of hollow, 50 ft. deep, course NE.
Asc.

43.50 Enter heavy aspen timber, bears N. and S.

44.20 Spur, projects N. 25° E.
Desc.

46.20 Leave timber, bears N. and S.

54.60 Bottom of hollow, 75 ft. deep, course NE.
Asc.

77.00 Top of ridge, bears NW. and SE.
Desc.

80.06 The cor. of secs. 9, 10, 15, and 16.
Land, mountainous.
Soil, clay loam and rock, 2nd and 3rd rate.
Subsoil, gravel and rock.
Timber, aspen.
Undergrowth, oak, buck, service berry, and sage brush.
Good grass for grazing.

Mountainous or heavily timbered land, or land covered
with dense undergrowth, 80.06 chs.

October 26, 1912.

October 29, 1912: At 7 h 44 m a.m., l.m.t., I set off 39° 47' N.

Chains

on the lat.arc; $15^{\circ}26'S.$, on the decl.arc;and determine a meridian with the solar, at the cor.of secs.9,10,15, and 16.

hence I run

$N.0^{\circ}01'W.$, bet.secs.9 and 10.

Over rolling mountainous land; through dense undergrowth and scattering timber.

Asc.

1.20 Top of ridge, bears NW and SE

Desc.

20.90 Bottom of hollow, 100 ft. deep, course NE.

Asc.

25.80 Top of spur, bears NE and SW

Desc.

40.00 Set an iron post, 5 ft. long, 1 in. in dia. 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{1}{2}$
 S 9 | S 10
 1912

Dig pits, $18 \times 18 \times 12$ ins. N. and S. of post, 5 ft. dist.; and raise a mound of earth, $2\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

October 29, 1912 At this cor. I set off $15^{\circ}32'S.$, on the decl.arc; and at 11 $\frac{1}{4}$ 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}47'N.$, which is the proper lat. nearly.

75.50 Bottom of hollow, 75 ft. deep, course NW.

Asc.

77.80 Top of ridge, bears NW and SE.

Desc.

80.00 Set an iron post, 5 ft. long, 2 ins. dia., 20 ins. in the ground, on rock, and surrounded by mound of stone, for cor. of secs. 3, 4, 9, and 10, with brass cap mkd.

T 12 S R 9 E
 S 4 | S 3
 S 9 | S 10
 1912

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Land, mountainous.

Soil, clay loam; 2nd rate.

Timber, aspen

Sub.T.12 S.,R.9 E.-Continued.

Chains

Undergrowth, oak, service berry, buckt, and sage brush.
Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,
80.00 chs.

October 29, 1912.

October 31, 1912: At 7 h 44 m a.m., l.n.t., I set off $39^{\circ}48'N$,
on the lat. arc; $14^{\circ}05'S$, on the decl. arc; and determine a
meridian, with the solar, at the cor. of secs. 3, 4, 9, and 10.

Thence I run

S. $89^{\circ}55'E$, on a random line bet. secs. 3 and 10.

40.00 Set temp. $\frac{1}{2}$ sec. cor.

79.94 Intersect N. and S. line, 7 lks. S. of the cor. of secs. 2, 3, 10, and
11.

Thence I run

N. $89^{\circ}58'W$, on a true line bet. secs. 3 and 10

Over, rolling mountainous land; through dense undergrowth.

Asc.

20.50 Top of ridge, bears NW and SE.

Desc.

24.10 Hollow, 75 ft. deep, course NW.

Asc.

39.97 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for $\frac{1}{2}$ sec. cor. with brass cap rkd.

$\frac{1}{2}$
S 3
S 10
1912

Dig pits, 1.8x1.8x1.2 ins. E. and W. of post, 3 ft. dist.; and
raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

42.00 Top of spur, bears NW and SE.

Desc.

44.70 Bottom of hollow, 50 ft. deep, course NW.

Asc.

57.10 Enter aspen timber, bears N. and S.

61.00 Leave aspen timber, bears N. and S.

Sub.T.12 S., R.9 E.- Continued.

Chains.
79.94

The cor.of secs.3,4,9, and 10.
 Land, rolling mountains.
 Soil, clay and sandy loam; 2d rate.
 Timber, aspen.
 Undergrowth, oak, serviceberry, buck, and sage brush.
 Good grass for grazing.
 Mountainous or heavily timbered land, or land covered
 with dense undergrowth 79.94 chs.
 October 31, 1912: At this cor.I set off 14° 10'S.on the
 decl.arc; and at 11h 44m a.m.l.m.t., I observe the sun
 on the meridian; the resulting lat.is 39° 48'N., which
 is the proper lat.nearly.

N.0° 02'W.on a true line bet.secs.3 and 4,
 Over rolling mountainous land; through dense undergrowth
 and scattering timber. Descend.

26.50 Bottom of hollow, 300 ft.deep, course S.80° W.
 Ascend.

40.00 Set an iron post 3 ft.long, 1 in.in dia., 26 ins.in the
 ground, for $\frac{1}{4}$ sec.cor., with brass cap mkd.

$\frac{1}{4}$ |
 S 4 | S 3
 1912

and raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft.high W.of
 cor.

41.50 Top of ridge, bears E.and W. Leave timber bears E.and W.
 Descend.

47.37 Intersect N.bdy.of Tp.19.00 chs.S.89° 31'E.of the cor.of
 secs.33 and 34, which is an iron post, 3 ins.in dia.,
 and extending 12 ins.above ground, firmly set and mkd.
 and witnessed as described by the surveyor general.
 Set an iron post, 3 ft.long, 2 ins.in dia., 24 ins.in
 the ground, for closing cor.of secs.3 and 4, with
 brass cap mkd.

Sub.T.12 S., R.9 E.- Continued.

Chains.

T 11	S R 9 E
S 33	S 34
	C C
S 4	S 3
T 12	S R 9 E
1912	

and raise a mound of stone 2 ft.base, 1½ ft.high S.of cor.

Note:Ralph Gentry, U.S.Surveyor, in a subsequent re-tracement of the S.bdy.of T.11 S., R.9 E., determined this closing distance to be S.89° 31'E.18.69 chs.

Land, mountainous.

Soil, clay and loose rock; 3d rate.

Timber, cedar, pinon pine, and aspen.

Undergrowth, oak, serviceberry, and sage brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth 47.37 chs.

October 31, 1912.

John P. Stewart
U.S. Surveyor.

October 28, 1912: At 7h 44m a.m.l.m.t., I set off 39°44' N.on the lat.arc; 13° 05'S.on the decl.arc; and determine a meridian with the solar at the cor.of secs.28,29, 32, and 33. Thence,for reasons already explained,I run S.0° 01'E.on a true line bet.secs.32 and 33.

Over mountainous land; through heavy timber and dense undergrowth. Asc.

36.80 Top of ridge(main ridge) 400 ft.above cor.,bears E.and W. Desc.

40.00 Set an iron post, 3 ft.long, 1 in.in dia., 26 ins.in the ground, for ¼ sec.cor., with brass cap mkd.

¼		
S32		S33
1912		

from which

. A red pine,15 ins.dia.,bears N.72°E.77 lks.dist. mkd.¼ S 33 B T

A balsam, 7 ins.dia., bears N.9° W.113 lks.dist. mkd.¼ S 32 B T

Sub.T.12 S.,R.9 E.-Continued.

Chains

October 28, 1912: At this cor. I set off $13^{\circ}11'S.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}44'N.$, which is the proper lat. nearly.

82.06 Intersect S. bdy. of Tp., 162 lks. $N. 89^{\circ}05'E.$, of the cor. of secs. 4 and 5, heretofore described.

Set an iron post, 5 ft. long, 2 ins. in dia., 12 ins. in the ground, on rock, and surrounded by mound of stone, for closing cor. of secs. 32 and 33, with brass cap mkd.

T 12	S	R	9	E
	S	32	S	33
		C	C	
S	5		S	4
T 13	S	R	9	E.
				1912

From which.

A balsam, 4 ins. dia., bears $N. 20^{\circ}E.$, 17 lks.

dist. mkd. T 12 S R 9 E S 33 B T.

A balsam, 4 ins. dia., bears $N. 5^{\circ}W.$, 38 lks.

dist. mkd. T 12 S R 9 E S 32 B T.

Land, mountainous.

Soil, mountain loam; 1st rate.

Timber, pine and aspen.

Undergrowth, oak, mahogany and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 82.06 chs.

October 28, 1912.

October 29, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}44'N.$, on the lat. arc; $13^{\circ}26'S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 28, 29, 32, and 33.

Thence I run

$N. 0^{\circ}02'W.$, bet. secs. 28 and 29.

Over mountainous land; through heavy timber and dense undergrowth.

Desc. abruptly.

Chain

Soil, clay loam and rocky, 3rd and 4th rate.
Timber, cedar, pinon pine, aspen, and pine.
Undergrowth, oak, service berry, willows, mahogany, and sage.
Good grass for grazing.
Mountainous or heavily timbered. Land, or land covered with dense undergrowth, 80;00, chs.

October 29, 1912.

October 31, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}45'11''$ on the lat. arc; $14^{\circ}05'S$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 20, 21, 28, and 29.

Thence I run East, on a random line bet. secs. 21 and 28.

40.00 Set temp. $\frac{1}{2}$ sec. cor. 22×16
80.16 Intersect N. and S. line, 14 lks. N. of the cor. of secs. 21, 22, 27, and 28.

Thence I run N. $89^{\circ}54'W$, on a true line bet. secs. 21 and 28.

Over mountainous land; through scattering timber and dense undergrowth.

Also

40.08 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

$\frac{S \quad 21}{S \quad 28}$
1912.

From which

A yellow pine, 22 ins. dia. bears N. $80^{\circ}W$, 190 lks. dist. mkd. $\frac{1}{2}$ S 21 B T.

A yellow pine, 20 ins. dia., bears S. $62^{\circ}W$, 107 lks. dist. mkd. $\frac{1}{2}$ S 28 B T.

47.00 Begin more abrupt ascent, bears NW and SE.

65.00 Top of ridge, 300 ft. above $\frac{1}{2}$ sec. cor. and 500 ft. above sec. cor., bears NW and SE.

Sub. T. 12 S., R. 9 E. - Continued.

Chains

Enter heavy cedar and pinon pine timber and leave undergrowth, bears NW and SE.
Desc. abruptly.

80.16 The cor. of secs. 20, 21, 28, and 29.

Land, mountainous.
Soil, loam; 2 ft. deep, 1st rate.
Timber, cedar, pinon pine, and yellow pine.
Undergrowth, oak and mahogany.
Good grass for grazing.
Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.16 chs.
October 31, 1912: At this cor. I set off $14^{\circ}10'S.$, on the decl. arc; and at 11 h 44 m a.m., l.n.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}45'N.$, which is the proper lat. nearly.

N. $0^{\circ}02'W.$, bet. secs. 20 and 21.

Over mountainous land; through heavy cedar and pinon pine timber and scattering mahogany undergrowth.
Asc. abruptly.

16.65 Top of ridge, 300 ft. above sec. cor., bears N. $60^{\circ}W.$ and S. $60^{\circ}E.$

Desc.
Leave heavy and enter scattering timber, bears N. $60^{\circ}W.$ and S. $60^{\circ}E.$
Enter dense undergrowth, bears N. $60^{\circ}W.$ and S. $60^{\circ}E.$

30.00 Head of swale, 300 ft. below ridge, course NE.

Asc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

S 20 | S 21
1912.

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

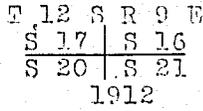
48.30 Top of ridge, 75 ft. above swale, bears NE and SW.

Enter heavy timber, bears NE and SW.
Desc.

Sub.T.12 S.,R.9 E.-Continued.

Chains
80.00

Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 16, 17, 20, and 21, with brass cap mkd.



From which

A yellow pine, 12 ins. dia., bears N. 87° E., 402 lks.
dist. mkd. T 12 S R 9 E S 16 B T.

A red pine, 12 ins. dia., bears S. 69° E., 204 lks.
dist. mkd. T 12 S R 9 E S 21 B T.

A red pine, 8 ins. dia., bears S. 5° 30' W., 166 lks.
dist. mkd. T 12 S R 9 E S 20 B T.

A balsam, 5 ins. dia., bears N. 35° W., 223 lks.
dist. mkd. T 12 S R 9 E S 17 B T.

Land, mountainous.

Soil, loam; 1st rate.

Timber, cedar and pinon pine, red and yellow pine and balsam.

Undergrowth, oak, mahogany and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.

October 31, 1912.

November 1, 1912: At 7 h 44 m a.m., l.n.t., I set off 39° 46' N., on the lat. arc; 14° 24' S., on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 16, 17, 20, and 21.

Thence I run

S. 89° 54' E., on a random line bet. secs. 16 and 21.

40.00 Set temp. 1/2 sec. cor.

80.18 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 15, 16, 21, and 22.

Thence I run

N. 89° 52' W., on a true line bet. secs. 15 and 21.

Over mountainous land; through heavy timber, and dense

Sub.T.12 S., R.9 E.-Continued-

Chains

undergrowth.

Desc.

1.50 Leave heavy and enter scattering timber, bears N. and S.

6.00 Telegraph line, bears N.20°W. and S.20°E.

8.59 D. and E.G.R.R. track, bears NW and S.20°20'E.

10.40 Price river, 75 lks. wide, 4 ft. deep, in bottom Price River
canon, 250 ft. below cor., course S.25°E

Asc.

27.00 Top of spur, bears NE and SW.

Desc.

30.50 Bottom of hollow, 250 ft. deep, course NE.

Asc.

40.09 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.
$$\begin{array}{r} \frac{1}{2} \\ S \quad 16 \\ S \quad 21 \\ 1912. \end{array}$$
And raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

46.00 Top of spur, bears N.20°E. and S.20°W.

Desc.

56.50 Bottom of hollow, 150 ft. deep, course N.

Asc.

68.00 Top of spur, projects NE.

Descend along north slope.

80.18 The cor. of secs. 16, 17, 20, and 21.

Land, mountainous, rough.

Soil, clay loam and rock; 3rd rate.

Timber, pinon pine, cedar, aspen, pine, and cottonwood.

Undergrowth, oak, service berry, buck, willows, and sage brush

Good grass for grazing.

Mountainous or heavily timbered land, or land covered
with dense undergrowth. 80.18 chs.November 1, 1912: At this cor. I set off 14°27'S., on the
decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun
on the meridian, the resulting lat. is 39°46'N., which is
the proper lat. nearly.

Sub.T.12 S.,R.9 E.-Continued.

Chains

N.0°02'W.,bet.secs.15 and 17.

Over mountainous land,through scattering timber and dense undergrowth.

Desc.

14.80 Bottom of hollow,500 ft.below cor.,course NE.

Enter heavy timber,bears NE and SW.

Asc.

34.00 Top of spur,projects NE.

Desc.abruptly over broken ledges.

40.00 Set an iron post,5 ft.long,1 in.in dia.,26 ins.in the ground,for $\frac{1}{4}$ sec.cor.with brass cap mkd.

S 17		S 16
	1912.	

From which

A spruce,12 ins.dia.,bears N.61°30'E.,89 lks.

dist..mkd. $\frac{1}{4}$ S 16 R T.

A spruce,14 ins.dia.,bears S.78°W.,45 lks.

dist..mkd. $\frac{1}{4}$ S 17 R T.

Holan siding bears N.89°E.

62.00 Leave heavy timber,bears NE and SW.

Enter scattering timber and dense undergrowth,bears NE and SW.

71.47 Price river,75 lks.wide,5 ft.deep,in bottom on Price River cañon,575 ft.below ridge,course S.46°E.

Asc.

75.83 D.and R.G.R.R.Track,bears N.45°45'W.,and S.45°45'E.

77.28 Telegraph line bears same

80.00 Set an iron post,5 ft.long,2 ins.in dia.,20 ins.in the ground,for cor.of secs.8,9,16,and 17,on rock,and surrounded by mound of stone,mkd.on brass cap

T 12	S R	9 E
S 8		S 9
S 17		S 16
	1912	

And raise a mound of stone,2 ft.base,1 $\frac{1}{2}$ ft.high,W.of cor. Land,mountainous.

Soil,clay and rock;3rd rate.

Timber,pine,spruce,pinon pine,cedar and cottonwood.

Sub. T. 12 S., R. 9 W. - Continued.

Chains

Undergrowth, oak, service berry, buck, sage, and willows.
Good grass for grazing.
Mountainous or heavily timbered land, or land covered
with dense undergrowth, 80.00 chs.

November 1, 1912.

November 2, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}47'W.$,
on the lat. arc; $14^{\circ}44'S.$, on the decl. arc; and determine a
meridian with the solar, at the cor. of secs. 8, 9, 16, and
17.

Thence I run

S. $89^{\circ}52'E.$, on a random line bet. secs. 9 and 16.

40.00 Set temp. 1 sec. cor.

80.10 Intersect N. and S. line, 7 lks. S. of the cor. of secs. 9, 10, 15,
and 16.

Thence I run

N. $69^{\circ}55'W.$, on a true line bet. secs. 9 and 16.

Over mountainous land; through dense undergrowth.

Descend through scattering timber.

20.00 Bottom of hollow, 500 ft. deep, course S. $30^{\circ}W.$

Asc

40.05 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for 1 sec. cor. with brass cap mkd.

$\frac{S \quad 9}{S \quad 16}$
1912.

From which

A pines pine, 14 ins. dia., bears N. $46^{\circ}30'W.$, 39 lks.
dist. mkd. S 9 B T.

A pines pine, 15 ins. dia., bears S. $24^{\circ}E.$, 55 lks.
dist. mkd. S 16 B T.

48.00 Top of ridge; bears NE and SW.

Desc. Over ledges.

80.10 The cor. of secs. 8, 9, 16, and 17.
1000 ft. below ridge.

Chairs

Land, mountainous.

Soil, clay loam and loose rock; 3rd rate.

Timber, cedar and pinon pine.

Undergrowth, oak, service berry, buck, and sage brush.

Good grass for grazing.

Mountainous land or land covered with dense undergrowth,
80.10 chs.

November 2, 1912: At this cor. I set off $14^{\circ}48'S.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $59^{\circ}47'N.$, which is the proper lat. nearly.

$N.0^{\circ}02'W.$, bet. secs. 8 and 9

Over mountainous land; through scattering timber and dense undergrowth.

Asc.

6.00 Enter heavy timber, bears E. and W.

12.85 Top of spur, 450 ft. above cor., bears $N.60^{\circ}E.$ and $S.60^{\circ}W.$

Desc.

20.50 Bottom of hollow, 100 ft. deep, course E.

Asc.

25.00 Top of spur, bears E. and W.

Desc.

52.00 Leave heavy and enter scattering timber, bears E. and W.

52.91 Telegraph line, bears $N.76^{\circ}E.$ and $S.76^{\circ}W.$

55.66 D. and R. C. R. R. track, bears $N.76^{\circ}E.$ and $S.76^{\circ}W.$

From this point the north portal of Tunnel No. 2, D. and R. C. R. R. track, bears $S.76^{\circ}W.$, about 5.50 chs. dist.

55.40 Price River, 75 lks. wide, 5 ft. deep, in bottom of Price River Canon, 450 ft. below spur, course $S.60^{\circ}W.$

Asc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 12 in. in the ground, on rock, and surrounded by mound of stone, for $\frac{1}{2}$ sec. cor. with brass cap and.

Sub. T. 12 S., R. 9 E. - Continued.

Chains

$\frac{1}{2}$ |
S 8 | S 9
1912.

From which

A cedar, 6 ins. dia., bears N. 72° W., 69 lks.
dist. mkd. $\frac{1}{2}$ S 8 E T.

A cedar, 6 ins. dia., bears S. 57° E., 51 lks.
dist. mkd. $\frac{1}{2}$ S 9 E T.

54.50 Top of ridge, 450 ft. high, bears NW and SE.

Desc.

68.75 Price River, 75 lks. wide, 3 ft. deep, in Price River Canon, 400
below ridge, course N.

Asc.

71.46 D. and R. G. R. R. track bears N. 87° 35' E. and S. 87° 35' W..

72.22 Telegraph line bears same.

72.50 Begin abrupt ascent, bears E. and W.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the
ground, for cor. of secs. 4, 5, 8, and 9, with brass cap mkd.

T 12 S R 9 E
S 5 | S 4
S 8 | S 9
1912.

From which -

A cedar, 5 ins. dia., bears N. 20° E., 227 lks.
dist. mkd. T 12 S R 9 E S 4 E T.

A cedar, 6 ins. dia., bears S. 4° 50' E., 114 lks.
dist. mkd. T 12 S R 9 E S 9 E T.

A pinon pine, 12 ins. dia., bears S. 78° W., 98 lks.
dist. mkd. T 12 S R 9 E S 8 E T.

A cedar, 10 ins. dia., bears N. 88° W., 109 lks.
dist. mkd. T 12 S R 9 E S 5 E T.

Land, mountainous.

Soil, clay and rock, 3rd. rate.

Timber, cedar and pinon pine.

Undergrowth, oak, sage and buck brush.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered
with dense undergrowth, 80.00 chs.

Sub.T.12 S., R.9 E.-Continued.

Chains

November 4, 1912: At 7 h 44 m a.m., l.m.t., I set off $59^{\circ}48'N.$, on the lat. arc; $15^{\circ}20'S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 4, 5, 8, and 9.

Thence I run

S. $89^{\circ}55'E.$, on a random line bet. secs. 4 and 9.

40.00 Set temp. $\frac{1}{2}$ sec. cor.

80.20 Intersect N. and S. line, 11 lks. S. of the cor. of secs. 5, 4, 9, and 10.

Thence I run

West, on a true line bet. secs. 4 and 9.

Over mountainous land; through scattering timber and dense undergrowth.

Asc.

1.60 Top of spur, bears NW and S E.

Desc.

10.15 Bottom of hollow, 75 ft. deep, course NW.

Asc.

51.10 Top of spur, projects N.

Desc.

40.10 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mtd.

$\frac{S}{S} \frac{4}{9}$
1912.

Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

46.85 Horse Creek, 5 lks. wide, 3 ins. deep, in hollow, 250 ft. deep, course S. $50^{\circ}W.$

Asc.

54.75 Top of spur, bears N. and S.

Desc.

64.60 Wash, 20 ft. deep, 40 lks. wide, on hollow, 75 ft. deep, course S.

Asc

69.50 Top of spur, bears N. $15^{\circ}E$ and S. $15^{\circ}W.$

Desc.

70.55 Wash, 35 lks. wide, 10 ft. deep, in hollow, 50 ft. deep, course S.

Asc.

Sub. T. 12 S., R. 9 E. - Continued.

Chains

80.20 The cor. of secs. 4, 5, 8, and 9.

Land, mountainous.

Soil, clay and rocky; 3rd rate. 2 ft. deep.

Timber, cedar and pinon pine.

Undergrowth, oak, service berry, sage and buck brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,
80.20 chs.

November 4, 1912: At this cor. I set off $15^{\circ}26'S.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $59^{\circ}48'N.$, which is the proper lat. nearly.

$N.0^{\circ}02'W.$, on a true line bet. secs. 4 and 5.

Over rolling mountainous land; through scattering timber and dense undergrowth.

Asc.

11.50 Top of ridge, 200 ft. above cor., bears N. and W.

Leave timber, bears E. and W.

Desc. over rolling mountainous land.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. with brass cap mkd.

$S 5^{\circ} S 4$
1912.

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

47.89 Intersect N. bdy. of Tp., ≈ 19.10 chs. $S.89^{\circ}37'E.$, of the cor. of secs. 32, and 55, which is an iron post, 3 ins. in dia., 12 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general.

Set an iron post, 3 ft long, 2 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 4 and 5, with brass cap mkd.

T 11 S R 9 E
S 32 | S 33
" | C C
S 5 | S 4
T 12 S | R 9 E
1912

Sub.T.12 S., R.9 E.- Continued.

Chains.

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high S. of cor.

Note: Ralph Gentry, U.S. Surveyor, in a subsequent re-tracement of the S. bdy. of T. 11 S., R. 9 E. determined this closing distance to be S. 89° 31' E. 19.17 chs.

Land, mountainous and rolling.

Soil, clay; 3d rate.

Timber, cedar and pinon pine.

Undergrowth, sage, serviceberry, and buck brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth
47.89 chs.

November 4, 1912.

Claude S. Hart

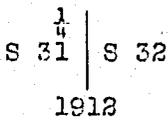
U.S. Transitman.

November 1, 1912: At 7h 44m a.m. l.m.t., I set off 39° 44' N. on the lat. arc; 14° 24' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 29, 30, 31, and 32. Thence, for reasons already explained, I run

S. 0° 02' E. on a true line bet. secs. 31 and 32, Over mountainous land; through scattering timber and dense undergrowth. Asc.

21.00 Divide ridge, 500 ft. above cor., bears N. 80° W. and S. 80° E. Desc.

40.00 Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for 1/4 sec. cor., with brass cap mkd.



raise a mound of stone 2 ft. base, 1 1/2 ft. high N. of cor.

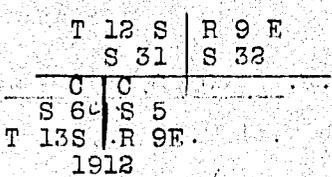
83.49 Intersect S. bdy. of Tp. 2.49 chs. N. 89° 05' E. of the cor. of secs. 5 and 6, heretofore described.

Set an iron post, 3 ft. long, 2 ins. in dia., 18 ins. in the ground, on rock, and surrounded by mound of stone for

Sub.T.12 S., R.9 E.- Continued.

Chains

closing cor.of secs.31 and 32, with brass cap mkd.



from which

A white pine, 7 ins.dia., bears N.4° E. 125' lks.
dist., mkd.T 12 S R 9 E S 32 B T

A white pine, 5 ins.dia., bears N.9° W.101 lks.
dist., mkd.T 12 S R 9 E S 31 B T

Land, mountainous.

Soil, mountain loam; 1st rate, about 2 ft.deep.

Subsoil, gravel.

Timber, red and white pine and aspen.

Undergrowth, mahogany, oak, serviceberry, and sage
brush.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth
83.49 chs. November 1, 1912.

November 2, 1912: At 7h 44m a.m.l.m.t., I set off 39° 44'
N.on the lat.arc; 14° 44'S.on the decl.arc; and deter-
mine a meridian with the solar at the cor.of secs.29,
30,31, and 32. Thence I run

N.0° 03'W.bet.secs.29 and 30,

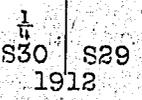
Over mountainous land; through scattering timber and
dense undergrowth. Desc.

23.00

Bottom of Crandall Canon, 500 ft.below cor., course N.
80°E. Asc.abruptly.

40.00

Top of spur, 600 ft.above canon, bears N.80°W.and S.80°E.
Set an iron post, 3 ft.long, 1 in.in dia., 26 ins.in the
ground, for $\frac{1}{4}$ sec.cor., with brass cap mkd.



and raise a mound of stone, 2 ft.base, 1 $\frac{1}{2}$ ft.high W.of
cor.

Sub.T.12 S., R.9 E.-Continued-

Chains

November 2, 1912: At this cor. I set off $14^{\circ}48'N.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}45'N.$, which is the proper lat. nearly.

Desc.

52.00 Swale, 100 ft. below ridge, course $S.80^{\circ}E.$

Asc.

60.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 19, 20, 29, and 30, with brass cap mkd.

T 12	S 19	E
S 19		S 20
S 30		S 29
1912.		

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. land, mountainous.

Soil, rich mountain loam about 18 ins. deep; 1st rate.

Subsoil, gravel.

Timber, pine and aspen.

Undergrowth, sage, oak, and mahogany.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth,

80.00 chs.

November 2, 1912.

November 4, 1912: At 7 h 44 m a.m., l.m.t., I set off $39^{\circ}45'N.$, on the 1st arc; $15^{\circ}20'S.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 19, 20, 29, and 30.

Thence I run

East, on a random line bet. secs. 20 and 29.

40.00 Set temp. sec. cor.

79.90 Intersect N. and S. line, 12 lks. N. of the cor. of secs. 20, 21, 29, and 29.

Thence I run

$N.89^{\circ}55'W.$, on a true line bet. secs. 20 and 29.

Sub.T.12 S.,R.9 E.-Continued.

Chains
 Over mountainous land; through heavy timber .
 Desc.
 15.00 Bottom of hollow, 300 ft. below cor., course S. 20° E.
 Asc.

30.50 Top of ridge, 300 ft. above hollow, bears N. and S.
 Note: The point for $\frac{1}{2}$ sec. cor. will fall in ledges where it
 will be impossible to perpetuate the cor.; therefore at
 this point I
 Set an iron post, 3 ft. long, 1 in. in dia., 12 ins. in the
 ground, on solid rock, and surrounded by mound of stone,
 for witness cor. to $\frac{1}{2}$ sec. cor. with brass cap mkd.

$\frac{1}{2}$ 12 S R 9 E
 $\frac{1}{2}$ 1
 W C $\frac{S}{S}$ $\frac{20}{29}$
 1912.

From which
 A pinon pine, 14 ins. dia., bears N. 62° W., 143 lks.
 dist. mkd. W C $\frac{1}{2}$ S 20 B T.
 A pinon pine, 12 ins. dia., bears S. 55° E., 53 lks.
 dist. mkd. W C $\frac{1}{2}$ S 29 B T.

Desc. abruptly over a series of ledges.
 39.95 Point for $\frac{1}{2}$ sec. cor. falls in broken ledges cor. not set
 50.20 Bottom of hollow, 500 ft. below ridge, course S.
 Asc. abruptly over ledges.

75.00 Leave timber, bears N. and S.
 79.90 The cor. of secs. 19, 20, 29, and 30.

Land, mountainous.
 Soil, mountain lean; 2nd rate. about 1 ft. deep.
 Subsoil, rock and gravel.
 Good grass for grazing.
 Timber, cedar and pinon pine.
 Mountainous or heavily timbered land, 79.90 chs.
 November 4, 1912. At this cor. I set off 15° 26' S, on the
 decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun
 on the meridian, the resulting lat. is 39° 45' N., which is the
 proper lat. nearly.

Chains

Note: Knowing that this line will not intersect W. bdy. of Tp., within limits; I run

West, on a true line bet. secs. 19 and 30.

Over mountainous land; through dense undergrowth.

Asc. abruptly.

1.30 Top of ridge, 40 ft. above cor., bears N. 20° E. and S. 20° W.
Desc.

12.80 Bottom of swale, 150 ft. below ridge, course NE.

This is the head of Accordingly Canon.

Asc. through aspen timber, bears N. and S.

21.10 Leave timber, bears N. and S.

33.70 Top of ridge, 500 ft. above swale or canon, bears N. 30° E. and S. 30° W.

Desc.

40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for sec. cor. with brass cap mkd.

$$\begin{array}{r} S \quad 19 \\ S \quad 50 \\ \hline 1912. \end{array}$$

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

57.50 Enter heavy and aspen timber, bears N. and S.

81.68 Intersect W. bdy. of Tp., 4.78 chs. North of the cor. of secs. 19, 24, 25, and 30, which is an iron post, 5 ins. dia., extending 16 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general.

Set an iron post, 5 ft. long, 3 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 19 and 30, with brass cap mkd.

$$\begin{array}{r} T \ 12 \ S \\ R \ 8 \ E \quad R \ 9 \ E. \\ \quad \quad C \ S \ 19 \\ \hline S \ 24 \ C \ S \ 30 \\ S \ 25 \\ \hline 1912. \end{array}$$

From which

A red pine, 16 ins. dia., bears N. 55° E. 35 lks.

dist. mkd. T 12 S R 9 E S 19 R E.

An aspen, 5 ins. dia., bears S. 55° E., 51 lks.

dist. mkd. T 12 S R 9 E S 30 P E.

Note: I destroy all marks on the cor. of secs. 19, 24, 25, and 30

Sub. T. 12 S., R. 9 E. - Continued.

Chains

which pertain to secs. 19 and 30.

Land, mountainous.

Soil, loam; 2nd rate.

Timber, aspen, and pine.

Undergrowth, oak, service berry, and sage.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth, 81.68 chs.

November 4, 1912.

November 5, 1912: At 7 h 44 m a.m., l.m.t., I set off $59^{\circ}45'N.$, on the 1st. arc; $15^{\circ}39'E.$, on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 19, 20, 29, and 30.

Thence I run

$N. 0^{\circ}05'W.$, bet. secs. 19 and 20.

Over mountainous land; through dense undergrowth.

Asc.

4.50 Top of ridge, 40 ft. above cor. bears $N. 30^{\circ}E.$ and $S. 30^{\circ}W.$

Desc.

40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor. mkd. on brass cap

$S 19 \left| S 20 \right.$
1912.

from which

A red pine, 6 ins. dia., bears $S. 72^{\circ}E.$, 15 lks.
dist. mkd. $\frac{1}{2}$ S 20 B T.

A red pine, 12 ins. dia., bears $N. 47^{\circ}W.$, 49 lks.
dist. mkd. $\frac{1}{2}$ S 19 B T.

45.00 Enter heavy pine timber, bears E. and W.

60.00 Leave timber, bears E. and W.

70.75 Bottom of Accordingly, canon, 450 ft. below ridge, course $N. 30^{\circ}E.$

Asc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the

Sub.T.12 S.,R.9 W.-Continued.

Chains

ground, for cor. of secs. 17, 18, 19, and 20, with brass cap rkd.

T ¹² S R ⁹ W	
S 18	S 17
S 19	S 20
1912.	

And raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
Land, mountainous; steep slopes.

Soil, rich mountain loam about 18 ins. deep.

Subsoil, gravel and rock.

Timber, red yellow and white pine and black balsam.

Undersgrowth, oak and service berry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with
dense undergrowth, 30.00 chs.

November 5, 1912: At this cor. I set off 15°44' S., on the decl.
arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on
the meridian, the resulting lat. is 39°46' N., which is the
proper lat. nearly.

John R. Stewart
U. S. Surveyor.

November 6, 1912: At 7 h 44 m a.m., l.m.t., I set off 39°46'
N., on the lat. arc; 15°57' S., on the decl. arc; and determine
meridian with the solar, at the cor. of secs. 17, 18, 19, and
20.

Thence I run

S. 89°55' E., on a random line bet. secs. 17 and 20.

40.00 Set temp. 1 sec. cor.

80.02 Intersect N. and S. line, at the cor. of secs. 16, 17, 20, and
21.

Thence I run

N. 89°55' W., on a true line bet. secs. 17 and 20.

Over mountainous land; through scattering timber and
dense undergrowth.

Desc.

7.50 Bottom of canon, 175 ft. below cor., course NE.

Asc.

Chains

25.00 Leave timber, bears N. and S.
 39.00 Top of ridge, 700 ft. above canon, bears N. 30° E. and S. 50° W.
 Desc.

40.01 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

$$\begin{array}{r} S. \quad \frac{1}{2} \quad 17 \\ \hline S \quad \quad 20 \\ 1912. \end{array}$$

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 73.25 Bottom of Accordingly canon, 650 ft. below ridge, course N. 50° E.
 Asc.

80.02 The cor. of secs. 17, 18, 19, and 20.

Land, mountainous steep slopes.

Soil, rich mountain loam about 1 ft. deep; 1st rate.

Timber, pine and aspen.

Undergrowth, oak and service berry.

Good grass.

Mountainous land, or land covered with dense undergrowth
 and 80.02 chs. with 80.02 chs.

November 6, 1912: At this cor. I set off 16° 02' S., on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is 39° 46' N., which is the proper lat. nearly.

Claude L. Hest.
 U.S. Transitman.

Nov. 5, 1912:

For reasons already explained I run

West, on a true line bet. secs. 18 and 19.

Over mountainous land; through dense undergrowth.

Asc.

14.60 Top of ridge, 500 ft. above cor., bears N. 40° E. and S. 40° W.
 Desc.

24.60 Enter heavy timber bears N. 40° E. and S. 40° W.

Sub.T.12 S.,R.9 E.-Continued.

Chains

- 40.00 Bottom of canon, 750 ft. below ridge, course NE.
Cannot perpetuate the cor. in canon bottom; therefore at
- 40.64 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for witness cor. to $\frac{1}{2}$ sec. cor., with brass cap mkd.

T 12 S R 9 E
W C S 18 18
S 19
1912.

From which

An aspen 4 ins. dia., bears N. 74° E., 16 lks.

dist. mkd. W C $\frac{1}{2}$ S 18 B T.

An aspen, 4 ins. dia., bears S. 4° E., 39 lks.

dist. mkd. W C $\frac{1}{2}$ S 19 B T.

- 41.00 Leave heavy and enter scattering timber, bears NE and SW.

- 71.32 Top of ridge, 930 ft. above canon, bears NE and SW.

Desc. gradually.

- 76.00 Bottom of swale, 20 ft. below ridge, course N. 20° E.

Asc.

- 81.63 Intersect W. bdy. of Tp. 4.68 chs. North of the cor. of secs.
13, 18, 19, and 24, which is an iron post, 5 ins. dia., extending
12 ins. above ground, firmly set, and mkd. and witnessed
as described by the surveyor general.
Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the
ground, for closing cor. of secs. 18 and 19, with brass cap mkd.

T 12 S
R 8 E R 9 E
S 18
CC
S 13 S 19
S 24
1912.

From which

An aspen, 4 ins. dia., bears N. 86° E., 101 lks.

dist. mkd. T 12 S R 9 E S 18 B T.

An aspen, 8 ins. dia., bears S. 82° E., 91 lks.

dist. mkd. T 12 S R 9 E S 19 B T.

Note: I destroy all marks on the cor. of secs. 13, 18, 19, and
24, which pertain to secs. 18 and 19.

Land, steep high mountains.

Soil, clay loam; about 1 ft. deep, 2nd rate.

Sub. S. 12 S., R. 9 E.-Continued.

Chains

Timber, pine and aspen.

Undergrowth, oak and service berry.

Good grass for grazing.

Mountainous, or heavily timbered land, or land covered with dense undergrowth, 81.63 chs.

November 5, 1912.

November 6, 1912: At 7 h 44 m a. m., l. m. t., I set off $39^{\circ}46'$ N., on the lat. arc; $15^{\circ}57'S.$, on the decl. arc; and determine meridian with the solar, at the cor. of secs. 17, 18, 19, and 20. Thence I run

N. $0^{\circ}03'W.$, bet. secs. 17 and 18.

Over mountainous land, through dense undergrowth.

Asc.

26.25 Top of ridge, 500 ft. above cor. bears N. $30^{\circ}E.$ and S. $30^{\circ}W.$

Desc.

40.00 Set an iron post, 3 ft. lon., 1 in. in dia., 26 ins. in the ground for $\frac{1}{2}$ sec. cor., with brass cap mkd.

S 18	S 17
1912.	

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

55.50 Enter heavy timber, bears NE and SW.

61.50 Canon, 700 ft. below ridge, course NE.

A creek, 2 lks. wide, 2 ins. deep, in bottom.

Leave timber, bears NE and SW.

Asc.

80.00 Set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, for cor. of secs. 7, 8, 17, and 18, with brass cap mkd.

T 12	S 7	S 8	R 9	W
S 18	S 17			
1912.				

And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. and, mountainous.

Soil, lean about 1 ft. deep; 2nd rate.

Subsoil, gravel.

- Chains
- Timber, pine, and aspen.
Undergrowth, oak, service berry, and sage brush.
Good grass for grazing.
Mountainous or heavily timbered land, or land covered with dense undergrowth, 80.00 chs.
November 6, 1912: At this cor. I set off $16^{\circ}02'S.$, on the decl. arc; and at 11 h 44 m a.m., l.m.t., I observe the sun on the meridian, the resulting lat. is $39^{\circ}47'N.$, which is the proper lat. nearly.
- John S. Stewart*
U. S. Surveyor.
- S. $89^{\circ}55'E.$, on a random line bet. secs. 8 and 17.
- 40.00 Set temp. $\frac{1}{2}$ sec. cor.
- 80.06 Intersect N. and S. line, 9 lks. S. of the cor. of secs. 8, 9, 16, and 17.
Thence I run
N. $89^{\circ}59'W.$, on a true line bet. secs. 8 and 17.
Over mountainous land; through scattering timber and dense undergrowth.
Desc.
- 2.00 Telegraph line, bears NW and SE.
- 3.57 Middle of D. and R. C. R. R. Track, bears N. $44^{\circ}20'W.$ and S. $44^{\circ}20'N.$
- 4.50 Middle of Price River, 100 lks. wide, 2 ft. deep, rocky bottom, rapid current, in bottom of Price River Canon, course SE.
Asc.
- 8.00 Mouth of Accordingly Canon, comes from the southwest
Asc. abruptly.
- 40.05 Set an iron post, 5 ft. long, 1 in. in dia., 18 ins. in the ground, on rock, and surrounded by mound of stone, for $\frac{1}{2}$ sec. cor. with brass cap and.

S	8
S	17
1912	

Sub.T.12 S.,R.9 E.-Continued.

Chains

- And raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 40.50 Top of ridge, 800 ft. above river, bears N. 50° E. and S. 30° W.
Desc. abruptly.
- 60.50 Creek, 2 lks wide, 2 ins. deep, in canon, 600 ft. below ridge,
course NE.
Asc. abruptly.
- 80.06 The cor. of secs. 7, 8, 17, and 18. /
Land, mountainous.
Soil, clay and gravel.
Timber, cedar and pinon pine, and red pine.
Undergrowth, oak, service berry, and sage brush.
Good grass for grazing.
Mountainous land, or land covered with dense undergrowth,
80.06 chs.

November 6, 1912.

November 7, 1912: At 7^h 44 m a.m. l.m.t., I set off $59^{\circ}47'11''$
on the lat. arc; $16^{\circ}15'S.$, on the decl. arc; and determine a
meridian with the solar, at the cor. of secs. 7, 8, 17, and
18.

Thence I run

Fore reasons already explained,

West, on a true line bet. secs. 7 and 18.

Over mountainous land; through dense undergrowth.

Asc.

- 10.35 Top of ridge, 250 ft. above cor., bears NE and SW.
Desc.
- 32.00 Enter heavy aspen timber, bears NE and SW.
- 34.00 Creek, 2 lks wide, 1 in. deep, in canon, 200 ft. below ridge,
course NE.
Asc.
- 37.00 Leave timber, bears NE and SW.
- 40.00 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for sec. cor., with brass cap mkd.

Sub.T.12 S.,R.9 E.-Continued.

Chains

S	7
S	18
1912.	

From which

An oak, 4 ins. dia., bears N. 84° E., 54 lks.

dist. mkd. $\frac{1}{2}$ S 7 B T.

An oak, 4 ins. dia., bears S. 83° E., 56 lks.

dist. mkd. $\frac{1}{2}$ S 13 B T.

50.50 Ridge, 250 ft. above canon, bears NE and SW

Desc.

75.00 Creek, 1 lk. wide, 1 in. deep, in canon, 300 ft. below ridge, course N. 50° E.

Asc.

Enter heavy aspen timber, bears NE and SW.

81.60 Intersect W. bdy. of Tp., 4.66 chs. North of the cor. of secs. 7,

12, 15, and 18, which is an iron post, 3 ins. in dia., extending 12 ins. above ground, firmly set, and mkd. and witnessed as described by the surveyor general.

Set an iron post, 5 ft. long, 2 ins. in dia., 24 ins. in the ground, for closing cor. of secs. 7 and 18, with brass cap mkd.

T 12 S	
R 8 E	R 9 E
C	S 7
S. 12 C	S 18
S 13	
1912.	

From which

An aspen, 4 ins. dia., bears N. 71° E., 52 lks.

dist. mkd. T 12 S R 9 E S 7 B T.

An aspen, 6 ins. dia., bears S. 47° E., 51 lks.

dist. mkd. T 12 S R 9 E S 13 B T.

Note: I destroy all marks on the cor. of secs. 7, 12, 15, and 18, which pertain to secs. 7 and 18.

Land, mountainous.

Soil, clay and gravel; 3rd rate.

Timber, aspen.

Undergrowth, oak, service berry, and sage.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered

Sub. 7.12 S., R. 9 E. - Continued.

Chains

with dense undergrowth, 8150 chs.

November 7, 1912: At this cor. I set off 16° 20' S., on the arc; and at 11 h 44 m a. m., l. m. t., I observe the sun on the meridian, the resulting lat. is 59° 47' N., which is the proper lat. nearly.

Claude L. Hust
U. S. Transitman.

Nov. 6, 1912:

N. 60° 05' E., bet. secs. 7 and 8.

Over mountainous land, through dense undergrowth.

Asc.

10.00 Top of ridge, 200 ft. above cor. bears NE and SW.

Desc.

30.00 Enter scattering timber, bears E. and W.

40.00 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for 1/2 sec. cor. with brass cap mkd.

S 7 1/2 | S 8
1912.

From which

An aspen, 8 ins. dia., bears N. 60° E., 314 lks.

dist. mkd. 1/2 S 8 B T.

An aspen, 4 ins. dia., bears S. 61° W., 113 lks.

dist. mkd. 1/2 S. 7 B. T.

52.00 Creek, 2 lks. wide, 1 in. deep, in canon, 400 ft. below ridge, course

N. W.

Asc.

57.00 Top of ridge, 300 ft. above canon, bears NE and SW.

Desc.

80.00 Set an iron post, 3 ft. long, 2 ins. dia., 24 ins. in the ground, for cor. of secs. 5, 6, 7, and 8; with brass cap mkd.

T 12 S R 9 E
S 6 | S 5
S 7 | S 8
1912

An obelisk a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Land, mountainous steep slopes.

Sub.T.12 S.,R.9 E. Continued.

Chains

Soil, clay mixed with gravel about 2 ft. deep. 2nd rate.
 Timber, aspen.
 Undergrowth, sage, oak, and service berry.
 Good grass.
 Mountainous land, or land covered with dense undergrowth,
 80.00 chs.

November 6, 1912.

John R Stewart
 U. S. Surveyor.

Nov. 7, 1912:

- B: 89° 59' E., on a random line bet. secs. 5 and 8
- 40.00 Set temp. sec. cor.
- 80.18 Intersect N. and S. line, 14 lks. S. of the cor. of secs. 4, 5, 8, and 9.
- Thence I run
- S. 89° 55' W., on a true line bet. secs. 5 and 8.
- Over mountainous land; through dense undergrowth and scattering timber.
- Asc.
- 10.00 Top of ridge, 100 ft. high, bears N and S.
- Desc.
- 18.00 Bottom of hollow, 250 ft. below ridge, course S.
- Asc.
- 32.00 Top of spur, 350 ft. above hollow, bears N. 10° E. and S. 10° W.
- Desc.
- 40.09 Set an iron post, 5 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{2}$ sec. cor., with brass cap mkd.

$\frac{1}{2}$
 $\frac{8}{8} \frac{5}{8}$
 1912.

And raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

- 52.00 Telegraph line, bears N. 50° W. and S. 50° E.
- 54.24 Middle of D. and R. R track, bears N. 50° W. and S. 50° E.

Sub.T.12 S., R.9 E.-Continued.

Chains

56.00 Middle of Price river, 130 lks. wide, 2 ft. deep, in Price River
Canon, 300 ft. below ridge, course S. 50° E.

Asc.

80.18 The cor. of secs. 5, 6, 7, and 8.

Land, mountainous.

Soil, clay mixed with gravel; 2nd rate.

Timber, cedar and pinon pine.

Undergrowth, sage, oak, service berry.

Good grass for grazing.

Mountainous land, or land covered with dense undergrowth;

80.18

November 7, 1912.

Claude S. West

U.S. Transitman.

November 7, 1912: At 7 h 44 m a.m., l.m.t., I set off 59° 48' N.,
on the lat. arc; 16° 15' S., on the decl. arc; and determine a
meridian with the solar, at the cor. of secs. 5, 6, 7, and 8.

Thence I run

For reasons already explained I run,

West, on a true line bet. secs. 6 and 7.

Over mountainous land; through dense undergrowth,

Desc.

23.00 Enter heavy timber, bears NW and SE.

25.50 Creek, 2 lks. wide, 1 in. deep, in canon, 300 ft. deep, course
NE.

Leave timber, bears NE and SW.

Asc.

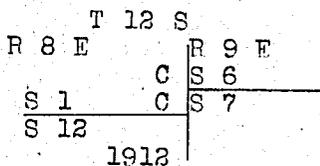
40.00 Set an iron post, 3 ft. long 1 in. in dia., 26 ins. in the
ground, for sec. cor. with brass cap mkd.

$$\frac{S \quad 6}{S \quad 7}$$

1912.

Sub.T.12.S., R.9.E.- Continued.

- Chains.
- and raise a mound of stone, 2 ft.base, 1½ ft.high N.of cor.
- 47.50 Top of ridge, 400 ft.above canon,bears NF. and SW. Desc.
- 71.00 Bottom of hollow, 200 ft.below ridge, course NF.
Asc.
- 76.50 Top of ridge, 125 ft.above hollow, bears NF. and SW.
Desc.
- 81.50 Intersect W.bdy.of Tp.5.00 chs.north of the cor.of secs. 1,6,7, and 12, which is an iron post, 3 ins.dia., extending 12 ins.above ground, firmly set, and mkd.and witnessed as described by the surveyor general.
Set an iron post, 3 ft.long, 2 ins.in dia., 24 ins.in the ground, for closing cor.of secs.6 and 7, with brass cap marked



and raise a mound of stone 2 ft.base, 1½ ft.high E.of the cor.

Note: I destroy all marks on the cor.of secs.1,6,7, and 12 which pertain to secs.6 and 7.

Land. mountainous.

Soil, gravelly and rocky; 3d rate.

Timber, pine and aspen.

Undergrowth, sage, oak, and serviceberry.

Good grass for grazing.

Mountainous or heavily timbered land, or land covered with dense undergrowth 81.50 chs.

November 7, 1912: At this cor.I set off 16° 20'S.on the decl.arc; and at 11h 44m a.m.l.m.t., I observe the sun on the meridian; the resulting lat.is 39° 48'N., which is the proper lat.nearly.

N.0° 03'W.on a true line bet.secs.5 and 6,

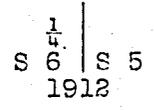
Sub.T.12 S., R.9 E.- Continued.

Chains.

Over mountainous land; through dense undergrowth. Desc.
25.50 Creek, 2 lks.wide, 1 in.deep, in canon 300 ft.below cor.
course N.70° E. Asc.

40.00 Top of ridge, 400 ft.above canon, bears N.80° E. and S.
80° W. Desc.

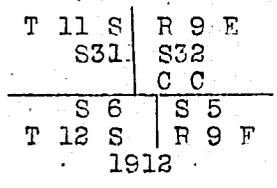
Set an iron post 3 ft.long, 1 in.in dia., 26 ins.in the
ground, for $\frac{1}{4}$ sec.cor., with brass cap mkd:



and raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft.high W.of
cor. Desc.

48.60 Intersect N.bdy.of Tp.19.87 chs.S.89° 31'E.of the cor.of
secs.31 and 32, which is an iron post 3 ins.dia., ex-
tending 12 ins.above ground, firmly set, and mkd.and
witnessed as described by the surveyor general.

Set an iron post 3 ft.long, 2 ins.in dia., 20 ins.in the
ground, and surrounded by mound of stone, for closing
cor.of secs.5 and 6, with brass cap mkd.



and raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft.high S.of
cor.

Note: Ralph Gentry, U.S.Surveyor, in a subsequent re-
tracement of the S.bdy.of T.11 S., R.9 E., determined
this closing distance to be S.89° 32'E.20.00 chs.

Land, mountainous.

Soil, gravelly and rocky; 3rd rate.

No timber. Undergrowth, sagebrush and oak. Good grass.

Mountainous land, or land covered with dense undergrowth

48.60 chs.

November 7, 1912.

John P. Stewart
U.S. Surveyor.

Chains

General Description.

This township is very rough and mountainous; the drainage and general slope of the country is toward Price River Canon, which runs through the township from northwest to southeast. Price River is about 100 ch. in average width and about 2 ft. in average depth. The current is rapid with generally a rocky bottom. Good water. The main line of the Denver and Rio Grande Railroad from Salt Lake City, Utah, to Denver, Colorado runs through the township along the canon bottom; the building of a double track is now in progress. The Utah Coal Railroad is now making surveys preparatory to building a railroad through this township also along the Price River Canon. There is a telegraph line paralleling the railroad; and a telephone line running from Castlegate to Colton and extending through to Salt Lake City runs from Castlegate part way up Price River Canon and then up Sulphur Canon.

Castlegate, a coal mining town of about 1000 inhabitants and owned by the Utah Fuel Company is located in sec. 36.

Sulphur Creek is about 5 lks. wide, and 3 ins. deep, in Sulphur Canon, runs into Price River.

Horse Creek is a small creek in secs. 4 and 9 draining into Price River.

There are a number of other small streams in the township all draining into Price River.

Thomas Arrowsmith has a house in sec. 2 .

There are two cabins in sec. 12, claimants unknown.

The only bed of coal noted is on the south bdy. sec. 36,

The main workings of the Utah Fuel Company's mines are located on this bed about 20.00 hrs. SE. of this outcrop.

Although no other outcrops of coal of any importance were seen; the whole township is probably underlaid with coal.

The township is heavily timbered with cedar, pinon and mahogany east of the river, and red, white, and yellow,

Chains

pine and aspen timber West of the river. There is some good saw timber in the southwest corner of the township. The entire township is covered with a dense undergrowth, of oak, service berry, buck, sassa, choke cherry, mahogany, and willows.

There is an abundance of grass all over the township, but it is not grazed much because it is too rough.

John P. Stewart

U. S. Surveyor.

Claude L. Heist

U. S. Transitman.

FINAL OATH OF UNITED STATES SURVEYOR.

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191 _____, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____

For final oaths of Surveyor and Transitman see book "P" T. 14 S. R. 2 W.

_____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Subscribed by said _____, and sworn to before me }
this _____ day of _____, 191 _____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, Oct. 30 _____, 191 5

The foregoing field notes of the survey of the Subdivisional lines of Township No. 12 South, Range No. 9 East of the Salt Lake Base and Meridian, Utah,

executed by John R. Stewart and Claude L. Heist under his special instructions dated May 23, _____, 191 _____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

[Handwritten Signature]
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

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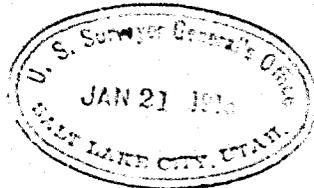
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Page

BOOK A-409

"Q"



FIELD NOTES

File

RETRACTMENT
OF THE SURVEY OF THE

SUBDIVISION OF T.12 S., R.10 E.

Of the Salt Lake Base and Meridian,

the State of Utah

EXECUTED BY

Ralph Gentry

supplemental special

in the capacity of U. S. Surveyor, under instructions dated August 31, 1914.

issued by the United States Surveyor General to govern surveys included in

group No. 13, which were approved by the Commissioner of the General Land

Office, September 12, 1914, pursuant to authority contained in the Act of

Congress dated, 191...

Survey commenced November 25, 1914

Survey completed November 27, 1914

BOOK A-409

INDEX DIAGRAM.

Township 12 South....., Range 10 East.....

6	5	5	4	4	3	3	2	2	1	1
7	8	9	10	11	12					
18	17	16	15	14	13					
19	20	21	22	23	24					
30	29	28	27	26	25					
31	32	33	34	35	36					

RETRACEMENT
OF
SUBDIVISION OF T.12 S., R.10 E.

Chains

Survey commenced Nov. 25, 1914, and was executed with a Young and Sons transit, for test and description of which see book of the retracement of the offset for the Second Standard Parallel S. through R.10 E.

At 2h^v17m p.m., l.m.t., I set off 39° 49' on the lat. arc; 29° 41'S., on the decl. arc; and determine a meridian with the solar at the cor. of secs. 1, 2, 11 and 12, T. 12 S., R.10 E., which is a sandstone, 10 x 8 x 4 ins. above the ground, marked and witnessed as described by the Surveyor General.

Thence I retrace

North, bet. secs. 1 and 2.

Over rolling land, through undergrowth of sage brush and grass

6.50 Wash, 25 lks. wide, 4 ft. deep, course S.60°W.

Ascend.

18.00 Spur, 30 ft. high, projects SW.

Descend.

21.00 Foot of spur, brs. NE. and SW.

Thence over rolling land.

40.08 Intersect the offset for the Second Stan. Par.S., through R.10 E., as retraced by myself.(see following statement.)

40.27 Fall 5 lks. W. of the closing cor. of secs. 1 and 2, heretofore described.

The course of this line is therefore N.0°04'E., I remove this iron post, leaving the old mound heretofore described, and at a point S.0° 04'W., 19 lks. dist. , at the intersection of the St. Par., S.89°15'E., 17.87 chns. dist., from the cor. of secs. 35 and 36, heretofore described, I set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, with brass cap marked

T11S	R10E
S35	S36
C	C
S2	S1

1914

RETRACEMENT
OF
SUBDIVISION OF T.12 S., R.10 E.

Chains

raise a mound of stone, 3 ft. base, 1½ ft. high N. of cor
The course of this closing line is therefore N.0° 04'E.,
and the length is 40.08 chns.

Land rolling and rolling hills, hills extending to the E.
Soil, light sandy loam, clay and loose rock.

Undergrowth, sage brush and grass.

From the cor. of secs. 2, 3, 10 and 11, which is a sand-
stone, 8 x 8 x 4 ins., above the ground, marked and
witnessed as described by the Surveyor General,

I retrace

N. 0° 51' E., bet. secs. 2 and 3, (the closing cor. being
visible.)

Over gently rolling land, through undergrowth of sage
brush and rabbit brush.

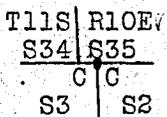
2.00 Wash, 20 lks. wide, 4 ft. deep, course SW.

9.00 Pole fence, brs. E. and W.

38.10 Pole fence, brs. E. and W.

40.00 The closing cor. of secs. 2 and 3, heretofore described
I remove this post, and at

40.13 At the intersection of the offset of the Second Stan.
Par. S., as retraced by myself, S.89° 31'E., 16.39 chs.
dist., from the cor. of secs. 34 and 35, heretofore
described, I set an iron post, 3 ft. long, 2 ins. in
dia., 24 ins. in the ground, with brass cap marked



1914

dig pits, 24 x 18 x 12 ins., crosswise on each line, E.
and W., 3 ft. dist., and S. of post 7 ft. dist.; and
raise a mound of earth, 4 ft. base, 2 ft. high S. of
cor.

The course of this line is therefore N.0° 51'E., and the
length is 40.13 chns.

RETRACEMENT
OF
SUBDIVISION OF T.12 S., R.10 E.

Chains

Land, gently rolling draining S.
Soil, light sandy loam and clay.
Undergrowth, sage brush, rabbit brush and grass.
No timber.

Nov. 25, 1914.

Nov. 26: At 2h 17m p.m., l.m.t., I set off $39^{\circ} 49'$ on the lat. arc; $20^{\circ} 53'S$. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 3, 4, 9 and 10, which is a lime stone, 10 x 8 x 6 ins., above the ground, marked and witnessed as describe by the Surveyor General.

The closing cor. being visible

I retrace

$N.0^{\circ}48'E.$, bet. secs. 3 and 4.

Over rolling land through undergrowth of sage brush and grass.

40.12 Intersect the offset for the Second Stan. Par. S., through E.10 E., as retraced by myself, $S.89^{\circ}15'E.$, 16.13 chns. dist., from the cor. of secs. 33 and 34, heretofore described.

At this point I set an iron post, 3 ft. long, 2 ins. in dia., 24 ins. in the ground, with brass cap marked

T11S	R10E
S33	S34
C	C
S4	S3

1914

raise a mound of stone, 3 ft. base, $1\frac{1}{2}$ ft. high N. of cor

40.30 The old closing cor. of secs. 3 and 4, heretofore described. I remove this post, leaving the old stone, heretofore described set .

The course of this closing line is therefore $N.0^{\circ} 48'E.$, and the length is 40.12 chns.

Land rolling.

Soil, light sandy loam and clay.

RETRACEMENT
OF
SUBDIVISION OF T.13 S., R.10 E.

Chains

Undergrowth, sage brush and grass.
No timber.

From the cor. of secs. 4, 5, 8 and 9, which is a sandstone, 8 x 8 x 6 ins., above the ground, marked and witnessed as described by the Surveyor General.

Thence I retrace

North, bet. secs. 4 and 5.

Over rolling land, through undergrowth of sage brush and grass.

28.23 Old road, brs. E. and W.

31.00 Foot of spur, brs. E. and W.

Ascend.

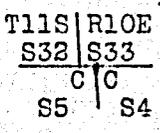
38.00 Top of spur, 100 ft. high, projects E.

Descend.

39.93 Intersect the offset for the Second Stan. Par. S., through

R.10 E., 53 lks. W. of the closing cor. of secs. 4 and 5, heretofore described, which is S.89°40'E., 14.03 chns., dist. from the cor. of secs. 32 and 33, heretofore described.

I destroy the marks on this post and re-mark it as follows:



1914

The course of this closing line is therefore N.0° 46'E., and the length is 39.93 chns.

Land, rolling and rolling hills.

Soil, light sandy loam and clay with loose rocks.

Undergrowth, sage brush and grass.

No timber.

Nov. 26, 1914.

RETRACEMENT
OF
SUBDIVISION OF T.12 S., R.10 E.

Chains

Nov. 27: At 9h 18m a.m., l.m.t., I set off $39^{\circ} 49'$ on the lat. arc; $21^{\circ} 02'S.$, on the decl. arc; and determine a meridian with the solar at the cor. of secs. 5, 6, 7 and 8, which is a sandstone, 14 x 14 x 6 ins. above the ground, marked and witnessed as described by the Surveyor General.

Thence I retrace North, bet. secs. 5 and 6.

Over rolling land, through undergrowth of sage brush and grass.

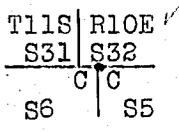
6.50 Wash, 25 lks. wide, 4 ft. deep, stream of clear water, 2 lks. wide, 1 in. deep, course SE.
Ascend.

32.00 Ridge, 100 ft. high, brs. NW. and SE.
Descend:

36.00 Foot of ridge, 60 ft. below top, brs. NW. and SW.
Thence over rolling land.

40.04 Intersect the offset for the Second Stan. Par. S. through R.10 E., 57 lks. W. of the closing cor. of secs. 5 and 6, heretofore described, which is $S.89^{\circ} 22'E.$, 11.75 chns. dist., from the cor. of secs. 31 and 32, heretofore described

I destroy the marks on this closing cor., and re-mark it as follows:



1914.

The course of this closing line is therefore $N.0^{\circ} 49' E.$, and the length is 40.04 chns.

Land rolling and hilly.

Soil, light sandy loam, clay and loose rock.

Undergrowth, sage brush and grass.

No timber.

Nov. 27, 1914.

Ralph Shuler
U. S. Surveyor

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FINAL OATH OF UNITED STATES SURVEYOR.

I, Ralph Gentry, U. S. Surveyor, do solemnly swear that, in pursuance of ^{supplemental} special instructions received from the U. S. Surveyor General for Utah bearing date of the 31st day of AUGUST, 1914, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the retracement and resurvey of the Subdivision of T.12 S., R.10 E., the retracement and resurvey of the Subdivision of T.11 S., R.9 E., and of the retracement and resurvey of the Subdivision of T.11 S., R.8 E., of the Salt Lake Base and Meridian, in the State of Utah, which are represented in the foregoing field notes ^{in books "E", "H" & "Q"} as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Utah and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Ralph Gentry
U. S. Surveyor.

Subscribed by said Ralph Gentry, and sworn to before me
this 20th day of January, 1915

W. D. Thoresen
U. S. Surveyor General for Utah.



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Salt Lake City, Utah, Oct. 30, 191

The foregoing field notes of the survey of retracement of subdivisional lines in Township No. 12 South, Range No. 10 East of the Salt Lake Base and Meridian, Utah

executed by Ralph Gentry under his special instructions dated August 31, 1914, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the retracements they describe, are hereby approved.

W. D. Thoresen
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in Utah, has been correctly copied from the original notes on file in this office.